Technology Advancement Group®, Inc.

TC-100 “COMMANDER” Operations Manual

TAG
22355 TAG Way
Dulles, VA 20166

1 Copyright © 2008 Technology Advancement Group®, Inc. (TAG®)

All rights reserved. This publication and its contents are proprietary to TAG. No part of this publication may be reproduced in any form or by any means without the written permission of TAG, 22355 TAG Way, Dulles, Virginia 20166-9310.

TAG has made every effort to ensure the correctness and completeness of the material in this document. TAG shall not be liable for errors contained herein. The information in this document is subject to change without notice. TAG makes no warranty of any kind with regard to this material, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose.

1.1 Trademarks

All trademarks, marks, names, or product names referenced in this publication are the property of respective owners, and TAG neither endorses nor otherwise sponsors any such products or services referred to herein.

2 About TAG

2.1.1 Summary of Qualifications

TAG has served as a leading provider of IT solutions to DoD customers over the past 20+ years and has a long-standing and respected history of providing Systems Engineering, Electronic Equipment and Program Management support to US Military warfighters. Headquartered in Dulles, Virginia, TAG's state-of-the-art 35,000 sq. ft. engineering and manufacturing facility provides all the infrastructure, equipment, and manpower necessary to engineer, design, test, manufacture, and certify products to the rugged requirements of the tactical combat theater. Our facilities in Dulles, VA, San Diego, CA, and St. Louis, MO, allow for rapid deployment of products and support across the globe.

TAG quickly, efficiently, and cost-effectively tailors rugged solutions for large DoD programs with specific MIL-STD requirements. TAG's comprehensive Quality Assurance (QA) policy – enforced through application of our UL-registered ISO 9001:2000 certified processes – enables TAG to rapidly deploy systems and solutions that reliably withstand the stresses of the tactical environment. Today, there are over 20,000 TAG systems deployed across various weapons platforms throughout the US Military. TAG effectively balances all corporate assets – our people, expertise, infrastructure, and experience – to consistently and successfully execute and deliver to the DoD.

TAG's success lies in focusing on the corporate Mission Statement and leveraging the tenets of our business model to ensure the customer's expectations are exceeded throughout lengthy program lifecycles.

TAG's Mission is to resolve our customers' IT challenges with World-Class:

- *Engineering;*
- *Manufacturing and Integration; and*
- *Lifecycle Management*

TAG has a proven track record in implementing these tenets to serve as a trusted advisor to our Government customers. TAG uses this foundation to ensure risk is mitigated, expectations are exceeded, and the customer can consistently rely on the company, our equipment, and our services.

2.1.2 Core Competences

2.1.3 Engineering

TAG's engineering methodology is built upon Multi-Disciplinary Optimization (MDO) and rigorous design reviews. Although PMs drive the schedule at TAG, Engineering leverages Computer-Aided Design (CAD) tools, Computational Fluid Dynamics (CFD) models, rapid prototyping processes, and diverse test equipment and facilities to ensure requirements are being met at every step of the design. TAG Engineering follows a proven design-review process, ensuring all entrance and exit criteria are met at each stage. Rigorous documentation is compiled to demonstrate requirement compliance, risks are mitigated, and decisions are prudent – throughout the design process.

TAG prides itself on its engineering laboratories and facilities. Over the past three years, TAG has invested in several pieces of equipment that allow TAG to test and certify products directly onsite to the harshest environmental requirements of military standards – including the MIL-STD-810F and DO 160D.

TAG's onsite test equipment currently includes a Highly Accelerated Lifecycle Testing (HALT) Chamber, an Electromagnetic Interference (EMI) test chamber, and a high-/low-temperature thermal test chamber. TAG's facility also provides:

- Floor plan designed to support a cellular manufacturing model with modular assembly lines
- A dedicated 24-hour system burn-in room
- A modern production status tracking and Enterprise Resource Planning (ERP) system with external web collaboration capabilities
- Dedicated Quality Assurance workstations for system compliance and validation inspection

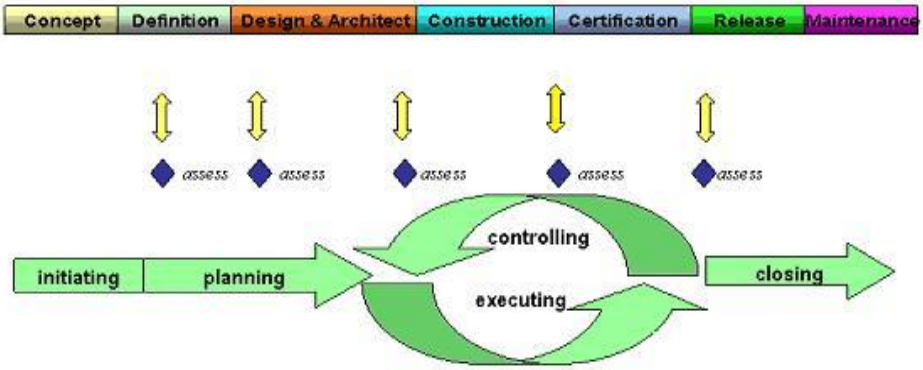
2.1.4 Manufacturing and Integration

TAG implements Cellular Manufacturing processes through our compartmentalized, state-of-the-art production facility to minimize waste byproducts and maximize production efficiency. TAG's manufacturing facility is physically partitioned to model the major philosophies of Lean Manufacturing. Consistent with the model, each of TAG's production cells are capable of operating in isolation; however personnel and tools are shared across all cells to streamline manufacturing operations, costs, and the

production/integration schedule. TAG's floor technicians are cross-trained in multiple disciplines so they can be redistributed to any cell that encounters production bottlenecks, which ensures optimal efficiency.

2.1.5 Lifecycle Management

TAG's world-class Program Management discipline models the renowned methodologies of the Project Management Institute (PMI) to ensure successful completion of the task at hand. Our Program Managers (PMs) serve as the voice of the customer – driving requirements to which the rest of TAG's organization answers. As an explicit tenet of TAG's corporate mission statement, the PMs not only track cost, schedule, and technical compliance throughout a project's period of performance, but also ensure the customer is supported well beyond it.



Document Revision History

Date	Version Number	Updated By	Description of Changes
07/08/2008	1.0	Alan Huckerby	Author
08/18/2009	1.1	Alan Huckerby	Author
03/290/2010	1.3	Alan Huckerby	Author

3 About This Manual

3.1.1 Scope and Audience

This Manual provides an introductory overview of the TC-100 “Commander”. The TC-100 sets the standard for Ultra Mobile Devices (UMD) with state-of-the-art technology. The newest rugged Ultra Mobile PC (UMPC”) can stand up to the harshest environments, and is designed specifically to be fully customized to support unique, mission-critical applications.

3.1.2 Organization

This manual is divided into the following chapters:

- **Chapter 1** provides Cautions and Warnings.
- **Chapter 2** provides operational information.
- **Chapter 3** Contains all relevant Procedures and TC-100 “COMMANDER” components.

Table of Contents

Contents

1 Copyright © 2008 Technology Advancement Group®, Inc. (TAG®) 2
1.1 Trademarks 2
2 About TAG 3
2.1.1 Summary of Qualifications 3
2.1.2 Core Competences 4
2.1.3 Engineering 4
2.1.4 Manufacturing and Integration 4
2.1.5 Lifecycle Management 5
3 About This Manual 7
3.1.1 Scope and Audience 7
3.1.2 Organization 7
4 Safety Instructions 13
4.1 Types of Warnings Used In This Manual 13
4.1.1 Safety Symbols and Labels 13
4.1.2 Conventions 13
5 TC-100 “Commander” Overview 16
5.1.1 Product Information 16
5.1.2 TC-100 “COMMANDER” 17
5.1.3 Rugged Ultra-Mobile PC (UMPC) Specifications 17
5.1.4 Com Port Settings 19
5.1.5 TC-100 “COMMANDER” Components 20
5.2 Solid State Power Supply 21
5.2.1 Power Management 21
6 Procedures 24
6.1.1 “Commander” Power Up 24
6.1.2 “Commander” Power Down 24
6.1.3 To operate ‘Commander’ in Night Vision Mode (NVIS) 24
6.1.4 Using the On-screen Keyboard 26
6.1.5 Using the *Bluetooth*® Wireless Feature (Optional) 26
6.1.6 Connecting to Another *Bluetooth* Device 27
6.1.7 Using ExpressCards (depending on your model) 31
6.1.8 ExpressCard Type 31
6.1.9 Inserting and Removing an ExpressCard 32
6.1.10 TC-100 Mini Port Replicator 33
6.1.11 TC-100 Attach Port Replicator 33
6.1.12 TC-100 Remove Port Replicator 33
6.1.13 TC-100 Stylus 34
6.1.14 Battery Removal 35
6.1.15 TC-100 GPS 36

6.1.16 TC-100 Com Port Configuration 37
7 Identifying Components Using Device Manager 41
7.1.1 Working with Device Properties 44
7.2 Installing and Removing Hardware in Windows 46
7.2.1 Using the Add New Hardware Wizard 47
7.3 Installing Legacy Peripherals 48
7.3.1 Removing Legacy Peripherals 48
8 BIOS 51
8.1.1 TAG Approved BIOS 51
8.1.2 Common BIOS Settings 51
8.1.3 AMI BIOS 08.00.15 54

List of Figures

Figure 5-1 TC-100 “COMMANDER” 17
Figure 5-2 TC-100 “COMMANDER” Components and Connectors (Front View) 20
Figure 5-3 TC-100 “COMMANDER” Components and Connectors (Top View) 20
Figure 5-4 TC-100 “COMMANDER” Mini Port Replicator and Connectors (Side View) 21
Figure 5-5 TC-100 “COMMANDER” Mini Port Replicator (Docking Connection) 21
Figure 5-6 Power Supply 22
Figure 6-1 Software Keyboard 26
Figure 6-2 System Tray 27
Figure 6-3 Add New Connection 28
Figure 6-4 Select Device 28
Figure 6-5 Wireless Transfer. 30
Figure 6-6 Express Card Types 31
Figure 6-7 Commander showing Express card slot. 32
Figure 6-8 TC-100 Mini Port Replicator 33
Figure 6-9 TC-100 Stylus and Port Replicator Removal 34
Figure 6-10 Batteries Removed From Commander 35
Figure 6-11 GPS Antenna Location 36
Figure 6-12 Main Screen 37
Figure 6-13 GPSDiag.exe Icon. 37
Figure 6-14 General Options Screen 38
Figure 6-15 Baud Rate Menu 39
Figure 6-16 COM2 Selected 40
Figure 7-1 Control Panel 41
Figure 7-2 System Properties 42
Figure 7-3 Device Manager 42
Figure 7-4 Device Manager 44
Figure 7-5 Properties Dialog Box 45
Figure 7-6 Control Panel 47
Figure 7-7 Add Hardware Wizard 47
Figure 7-8 Control Panel 48
Figure 7-9 System Properties 49
Figure 7-10 Device Manger 49
Figure 8-1 Main BIOS Screen 54
Figure 8-2 CPU Configuration 54
Figure 8-3 Configure Advanced CPU Settings Screen (Top Half). 55
Figure 8-4 Configure Advanced CPU Settings Screen. 55
Figure 8-5 Disable DTS Based Thermal Management. 56
Figure 8-6 Max CPUID Value Limit Screen. 56
Figure 8-7 Max C State Screen. 57
Figure 8-8 IDE Configuration 57
Figure 8-9 ATA/IDE Configuration 58
Figure 8-10 Super IO Configuration. 58

Figure 8-11 Serial Port 1 Address Screen. 59
Figure 8-12 ACPI Configuration Screen. 59
Figure 8-13 ACPI Version Features 60
Figure 8-14 General ACPI Configuration. 60
Figure 8-15 General ACPI Configuration Screen. 61
Figure 8-16 General ACPI Configuration. 61
Figure 8-17 ACPI Settings Screen. 62
Figure 8-18 Advanced ACPI Configuration Screen. 62
Figure 8-19 ACPI Settings Screen. 63
Figure 8-20 South Bridge ACPI Configuration Screen. 63
Figure 8-21 Advanced Settings Screen. 64
Figure 8-22 MPS Revision Screen. 64
Figure 8-23 Advanced Settings Screen. 65
Figure 8-24 PCI Express Configuration Screen. 65
Figure 8-25 Advanced Settings Screen. 66
Figure 8-26 Smbios Configuration Screen. 66
Figure 8-27 Advanced Settings Screen. 67
Figure 8-28 Configure Remote Access Type and Parameters Screen. 67
Figure 8-29 Advanced Settings Screen. 68
Figure 8-30 USB Configuration Screen. 68
Figure 8-31 Advanced Settings Screen. 69
Figure 8-32 Trip Points for DIS Screen. 69
Figure 8-33 Advanced PCI/PnP Settings Screen. 70
Figure 8-34 Advanced PCI/PnP Settings Screen. 70
Figure 8-35 South Bridge Configuration Screen 71
Figure 8-36 Boot Settings Configuration Screen. 71
Figure 8-37 Boot Settings Configuration Screen. 72
Figure 8-38 Boot Settings Configuration Screen. 72
Figure 8-39 Security Settings Screen. 73
Figure 8-40 Advanced Chipset Settings Screen. 73
Figure 8-41 North Bridge Chipset Configuration Screen. 74
Figure 8-42 Boot Display Configuration Screen. 74
Figure 8-43 Boot Display Configuration Screen. 75
Figure 8-44 Advanced Chipset Settings Screen. 75
Figure 8-45 South Bridge Chipset Configuration Screen 76
Figure 8-46 Save Changes and Exit Screen. 76
Figure 8-47 Exit Screen 77

List of Tables

Table 5-1 TC-100 Commander Specifications 19
Table 6-1 Bluetooth Settings. 27
Table 6-2 Wireless File Transfer 29

Chapter 1

Cautions and Warnings.

Electronically distributed. Subject to user discretion when printed.

4 Safety Instructions

4.1 Types of Warnings Used In This Manual

Read this manual thoroughly, paying special attention to the caution and warnings.

4.1.1 Safety Symbols and Labels

DANGER

WARNING

CAUTION

These warnings and cautions indicate situations or practice that might result in property damage.

4.1.2 Conventions

4.1.2.1 Important Messages

Important messages appear where mishandling of components is possible or when work orders can be misunderstood. These messages also provide vital information associated with other aspects of system operation. The word “important” is written as “**IMPORTANT**,” both capitalized and bold and is followed by text in italics. The italicized text is the important message.

4.1.2.2 Warnings

Warnings appear where overlooked details may cause damage to the equipment or result in personal injury. Warnings should be taken seriously. Warnings are easy to recognize. The word “warning” is written as “**WARNING**,” both

capitalized and bold and is followed by text in italics. The italicized text is the warning message.

4.1.2.3 Cautions

Cautionary messages should also be heeded to help you reduce the chance of losing data or damaging the system. Cautions are easy to recognize. The word “caution” is written as “**CAUTION**,” both capitalized and bold and is followed by text in italics. The italicized text is the cautionary message.

4.1.2.4 Notes

Notes inform the reader of essential but non-critical information. These messages should be read carefully as any directions or instructions contained therein can help you avoid making mistakes. Notes are easy to recognize. The word “note” is written as “**NOTE**,”

Chapter 2

TC-100 “COMMANDER”.

Electronically distributed. Subject to user discretion when printed.

5 TC-100 “Commander” Overview

5.1.1 Product Information

The TC-100 “Commander” sets the standard for Ultra Mobile Devices (UMD) with state-of-the-art technology. The newest rugged Ultra Mobile PC (UMPC) can stand up to the harshest environments, and is designed specifically to be fully customized to support unique, mission-critical applications.

- Light, Small Footprint Chassis, <4lbs (fits in a pocket).
- The TC-100 Commander does not use dissimilar metals in its construction.
- Integrated GPS for Satellite Navigation.
- Steaming Video Feed for live data.
- Sunlight Readability and Reduced Glare for use in the battle field.
- Touch Screen Display.
- Mobile Communication and Data (situational awareness).
- Dual Hot Swappable Batteries (extend operations without interrupting power).
- Customizable Button Boards for easy application.

Your system may contain components not described in this User Manual. For detailed information on these components, refer to the manufactures website or contact TAG Technical Support at **tech.support@tag.com**.

5.1.2 TC-100 “COMMANDER”

Figure 5-1 TC-100 “COMMANDER”

5.1.3 Rugged Ultra-Mobile PC (UMPC) Specifications

Chassis	Ergonomically Designed, Conduction-Cooled Aluminum Chassis
Dimensions	10.55" W x 5.82" H x 1.99" D
Weight	3.8lbs w/Batteries; 2.6lbs w/out Batteries
Mounting/Carrying	Optional Vehicle Mount, Kneeboard, Hand Strap, Shoulder Strap
Processor(s)	Intel® Atom Z530. 1.6 GHz
Chipset	Intel® SCH
Memory	1GB DDR2
Storage	Removable 1.8” Solid State Hard Drive (Optional Capacities Available)
Storage Encryption	Optional 128, 192 or 256-bit SATA to SATA Encryption Engine (Available Q1 2010)
	NIST and CSE Certified Hardware AES (Advanced Encryption Standard) Algorithm
Video Capture	Composite NTSC/PAL/SECAM (Option Available Q1 2010)
Audio	External Headphone/Microphone Input; Single Speaker
Controls & Indicators	(10) Customizable Buttons
Pointing Device	Directional Pad (D-Pad) Mouse
Keyboard	Optional Keyboard

Power Supply	AC/DC Adapter (100-120VAC, 200-240VAC Input,50-60Hz 15VDC 3.67A Output)
Battery	Dual Hot-Swappable 34Whr Batteries
Battery Life	Up to 8 Hrs
Operating System	Supports Microsoft Windows® and Linux® (Contact Sales Rep for Options)
SD Card Slot	(1) on Commander
SIMM Card Slot	(1) on Commander (Applicable when configured with GSM Interface)
User Expansion Options	(1) PCMCIA/Cardbus Slot OR (1) Express Card 34/54 Slot
Display Size	7” Widescreen Display
Screen Type	Resistive Touch Screen
Resolution	1024 x 600
Brightness	250 cd/m²
Contrast Ratio	400:1
Viewing Angle	140° (H) 110° (V)
Backlight	LED
Color Support	True Color
Sunlight Readable	Standard
NVIS, NVG Compatible	Optional
WLAN	802.11b/g (802.11n Optional)
WPAN	Bluetooth Functionality (Standard On Certain Configuration)
System Antennas	Dual Integrated WLAN/WPAN Antennas
	Single Integrated GPS Powered Helical Antenna
GPS	GPS, External Antenna May Be Required For In-Vehicle Operation
USB 2.0	(1) on Commander Unit
Power	(1) 15-16 VDC Input
Audio Line Out	(1) 2.5mm Audio Port
Standard Port Replicator	Vertical Port Replicator (Optional)
(2) USB 2.0	(2) USB 2.0
(1) 15-16 VDC Power Input	(1) 15-16 VDC Power Input
(1) 10/100/1000 Ethernet	(1) 10/100/1000 Ethernet
(1) 2.5mm Audio Port	(1) Audio Input/Output (Through Micro-D Connector)
	(1) Serial Port (Through Micro-D Connector)

	(1) Video Input (Through Micro-D Connector)

Table 5-1 TC-100 Commander Specifications

5.1.4 Com Port Settings

- The GPS UART Interface has a bit rate range of 1.2kbps to 115.2 kbps.

Protocol options for the GPS

- NMEA, SiRFBINARY™, and AI3/F.
- Default setting for the GPS UART Interface is Com2, 9.6 kbps/NMEA Protocol.

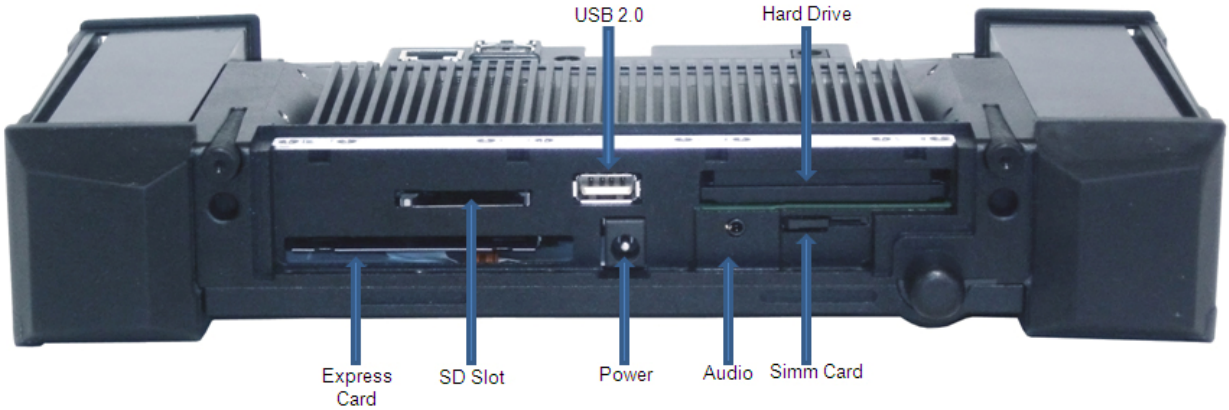
GPS Features

- GPS technology based upon by the SiRF Technologies™ SiRFStar III™
- UART interface
- Fast acquisition time and high sensitivity GPS Receiver
- Ultra-low power consumption.
- Surface Mount Design (SMD)
- 20 channel GPS receiver
- Multi-path Mitigation
- Uses NAVSTAR GPS L1 C/A signal
- SBAS (WAAS, ENGOS and MSAS) support
- Available Software accelerator for improved sensitivity: Satellite acquisition and
- tracking
- Format Selectable Output Data: NMEA, SiRFBinary™ and AI3/F
- Compatible with SiRF Technologies GSW3 Software

5.1.5 TC-100 “COMMANDER” Components

This section provides an overview of the most common components installed in the TC-100 “COMMANDER.” Information is also provided on how to identify specific components within your TC-100 “COMMANDER”. For detailed information on the specific components installed, refer the manufactures website.

Figure 5-2 TC-100 “COMMANDER” Components and Connectors (Front View)



NOTE: Simm Card, is used in conjunction with optional 3G modems.

Figure 5-3 TC-100 “COMMANDER” Components and Connectors (Top View)

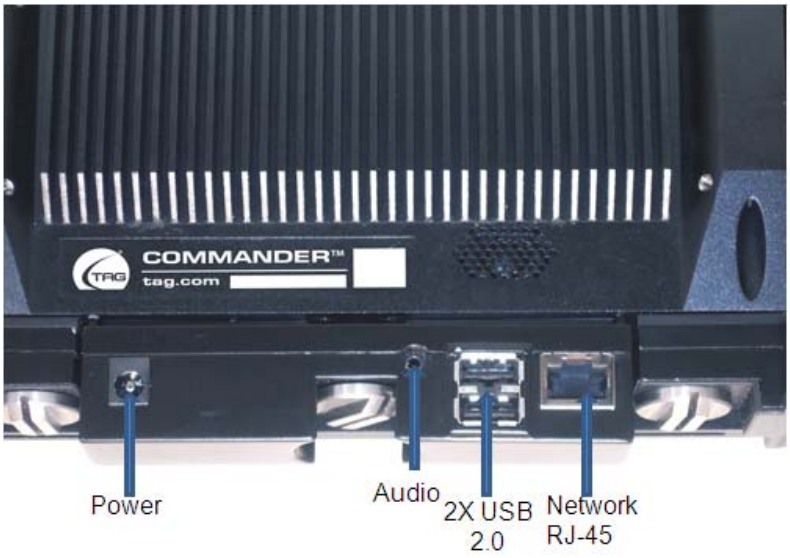


Figure 5-4 TC-100 “COMMANDER” Mini Port Replicator and Connectors (Side View)

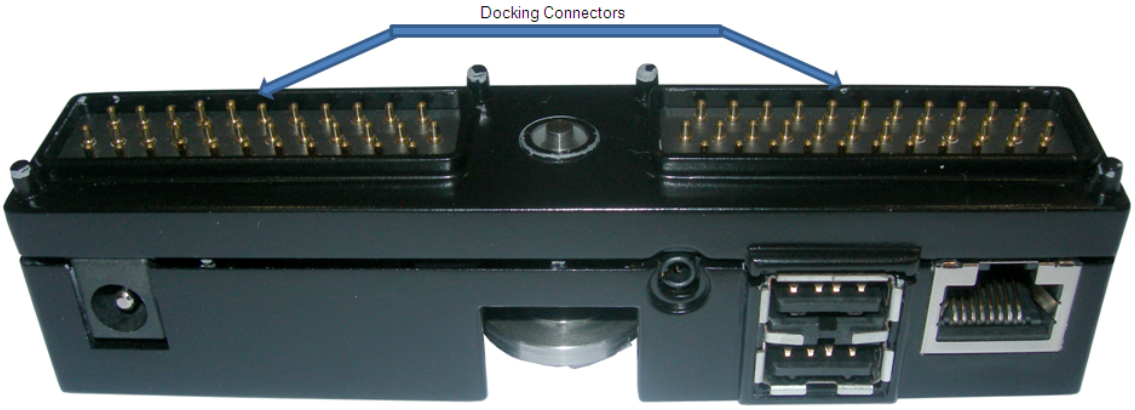


Figure 5-5 TC-100 “COMMANDER” Mini Port Replicator (Docking Connection)

5.2 Solid State Power Supply

5.2.1 Power Management

Modern motherboards provide Advanced Configuration and Power Management Interface (ACPI) settings such as wake-up, power button function and standby/suspend timers. These functions are configured in the CMOS Setup.

Figure 5-6 Power Supply

5.2.1.1 Power Supply Specifications

- AC/DC Adapter (120VAC Input, 16VDC 4.0A Output)
- Dual Hot-Swappable 34Whr batteries.

1 Estimated battery life 8hrs

Chapter 3

Procedures.

Electronically distributed. Subject to user discretion when printed.

6 Procedures

The procedures within this Chapter contain relevant information to ensure the TC-100 “COMMANDER” maintains its maximum performance potential.

6.1.1 “Commander” Power Up

Check to make sure that all the cables are seated and connected correctly to the back of the unit such as, mouse, monitor VGA cable and both power cables. (If equipped). In the most common use case, the unit will be used in stand-alone mode, without a, mouse, monitor or power cable.).

Power Up

1. Press **Power Button** then turn Brightness **UP**

NOTE: If unit is to use battery power the batteries must be charged (If batteries are to low unit must be plugged in to the external power supply to power on.

6.1.2 “Commander” Power Down

Soft Shutdown

1. At Windows Start Menu Select **Shut Down**.
2. Select **Shut Down** from the drop down menu and press **OK**.

Hard Shut Down

1. Hold **Down Power Button** within **Windows** this will **Shut Down All**.

NOTE: Ensure that LED’s are off otherwise they will drain the battery).

6.1.3 To operate ‘Commander’ in Night Vision Mode (NVIS)

1. Commence with the ‘Commander’ turned on in normal operating mode

2. Turn the contrast all the way **DOWN**, This action will place the “Commander “in the NVIS Mode of operation.
3. To return to normal operational mode turn the contrast all the way **UP.**

6.1.4 Using the On-screen Keyboard

Use the on-screen keyboard to enter text and perform various keyboard functions.

1. Click the on-screen keyboard icon. located on the Windows system tray and the software keyboard will appear onscreen.

Figure 6-1 Software Keyboard

2. Tap the characters on the on-screen keyboard with the touchscreen digitizer pen.

   NOTE: To protect the LCD display, use the touchscreen or digitizer pen on your touchscreen.

6.1.5 Using the *Bluetooth*® Wireless Feature (Optional)

Depending on your model, your tablet PC may incorporate the Bluetooth capability for short-range (about 10 meters) wireless communications between devices without requiring a cable connection. With Bluetooth, data can be transmitted through walls, pockets and briefcases as long as two devices are within range. By default, the Commander Bluetooth feature is active (always ON) upon booting the Commander and is in the general discoverable and pairable mode.

The status of the Bluetooth connection is indicated by the Bluetooth icon located in the system tray in the lower-right part of the screen.

Status	Icon
On	(blue with white logo).
Connected	(blue with green logo)

Figure 6-2 System Tray

You can use the Bluetooth Utility to configure Bluetooth connection settings and transfer files.

6.1.6 Connecting to Another *Bluetooth* Device

1. Make sure that the target *Bluetooth* device is turned on, discoverable and within close range. (See the documentation that came with the *Bluetooth* device.)
   Right-click (press lightly until a pop-up menu appears) the icon,
   and then click **Add New Connection**.

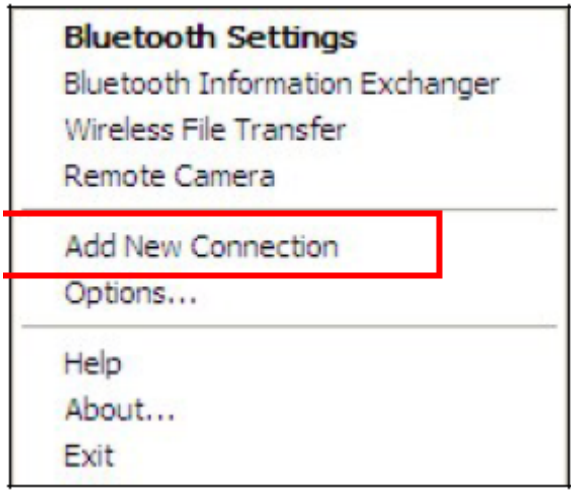


Table 6-1 Bluetooth Settings.

2. The **Add New Connection Wizard** window appears. Select **Express Mode (Recommended)**, and then click **Next**.

Add New Connection Wizard
This wizard will create the settings for Bluetooth device connection.
Please ensure your Bluetooth devices are on and set to discoverable.
In order to certify Bluetooth, there are times when the security setting is modified temporarily. When setup ends, it returns to the original setting automatically.
Express Mode (Recommended)
Custom Mode
This allows you to set the details for the connection.
< Back
Next >
Cancel

Figure 6-3 Add New Connection

3. Select the device to connect to and click **Next**.

Figure 6-4 Select Device

Depending on the type of *Bluetooth* device that you want to connect to, you will need to enter the pertinent information.

Sending a File

4. Make sure that the target *Bluetooth* device is turned on, discoverable and within close range. (See the documentation that came with the *Bluetooth* device.)
5. Right-click the icon, and then click **Wireless File Transfer**.

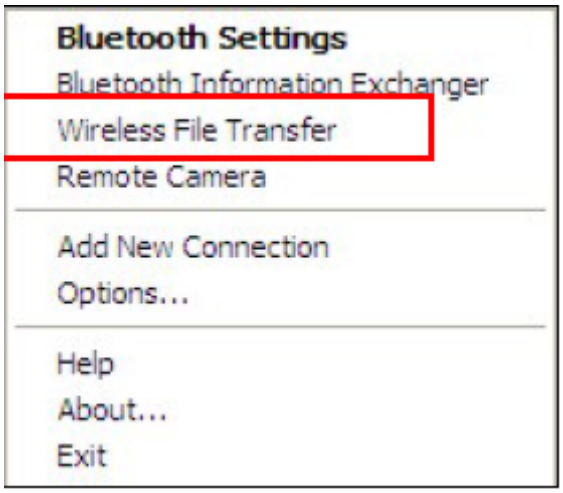


Table 6-2 Wireless File Transfer

6. In the **Wireless File Transfer** window, click **Add** to browse for the file to send.

7. Click the target device from the list, and then click **Send** to start the transfer procedure.

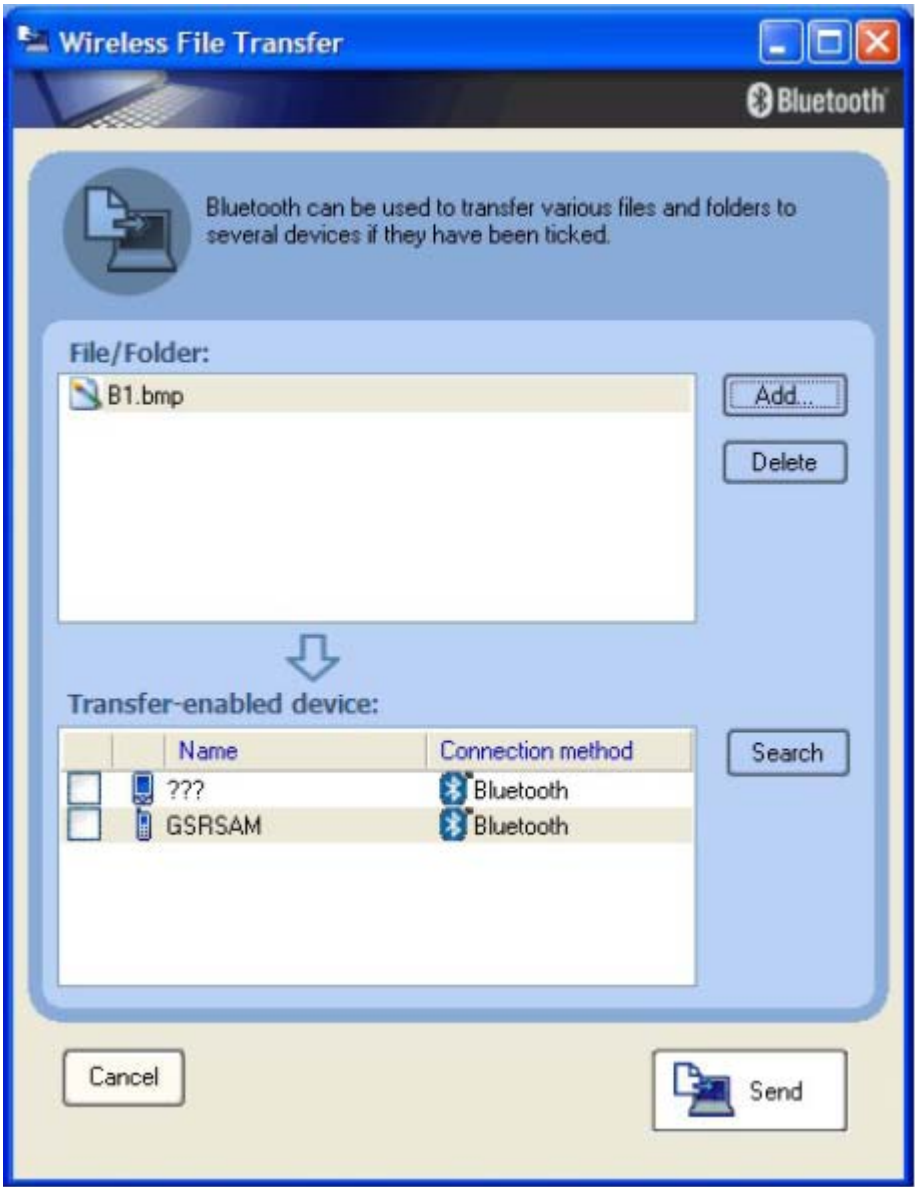


Figure 6-5 Wireless Transfer.

6.1.7 Using ExpressCards (depending on your model)

NOTE: The ExpressCard interface is not compatible with the PC card interface. You need optional adapters for using PC cards if your tablet PC comes with the ExpressCard slot.

ExpressCard supports the USB 2.0 serial data interface (supporting speeds of up to 480 Mbps), improving speed in data transfer while conserving power usage.

6.1.8 ExpressCard Type

The ExpressCard slot can accommodate a 54 mm (ExpressCard/54) or 34 mm (ExpressCard/34) wide ExpressCard. Typical ExpressCards support a very extensive range of applications including memory, wired and wireless communication cards, and security devices. Shown next are the appearances of ExpressCards for your reference.

ExpressCard/54 **ExpressCard/34**

Figure 6-6 Express Card Types

6.1.9 Inserting and Removing an ExpressCard

6.1.9.1 Insert an ExpressCard:

1. Locate the ExpressCard slot ( ) on the Top of the Commander.
2. Slide the ExpressCard, with its label facing up, all the way into the slot until the rear connectors click into place
3. When a new card is seated, the tablet PC will detect it and try to install the appropriate driver. Follow the on-screen instructions to complete the process.

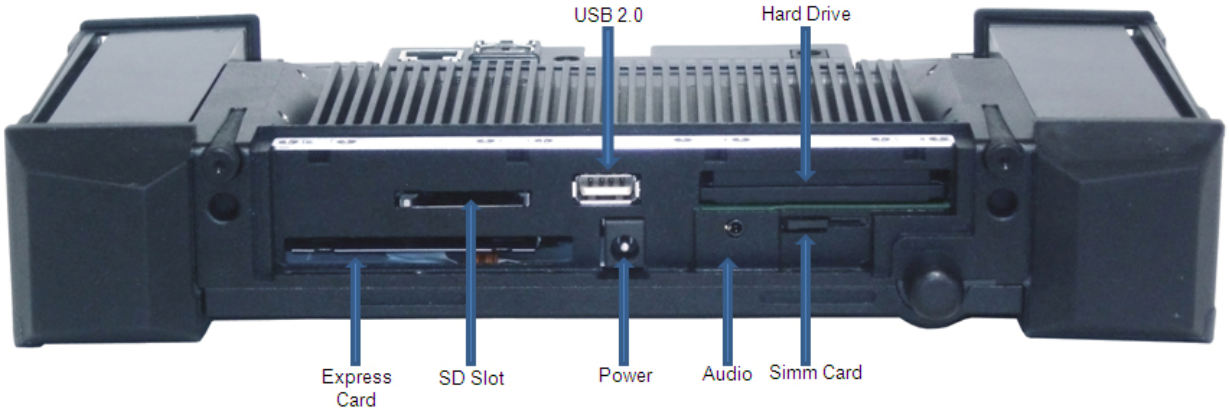


Figure 6-7 Commander showing Express card slot.

6.1.9.2 Remove an ExpressCard:

1. Double-click the **Safely Remove Hardware** icon found on the Windows XP taskbar and the **Safely Remove Hardware** window appears on screen.
2. Select (highlight) the ExpressCard from the list to disable the card.
3. Push the ExpressCard slightly to release the card.
4. Pull the card out of the slot.

6.1.10 TC-100 Mini Port Replicator

While the Commander has a long battery life of 7+ hours, it can be charged through the mini-port replicator. The replicator has unique pins that easily fit the bottom the Commander with a secure fastener. The conveniently small, portable size of the mini-port replicator allows users to take it on the go and hook up to any available power source. It also comes with two (2) USB Ports, One (1) 2.5mm Audio Port and one (1) Ethernet Connection.

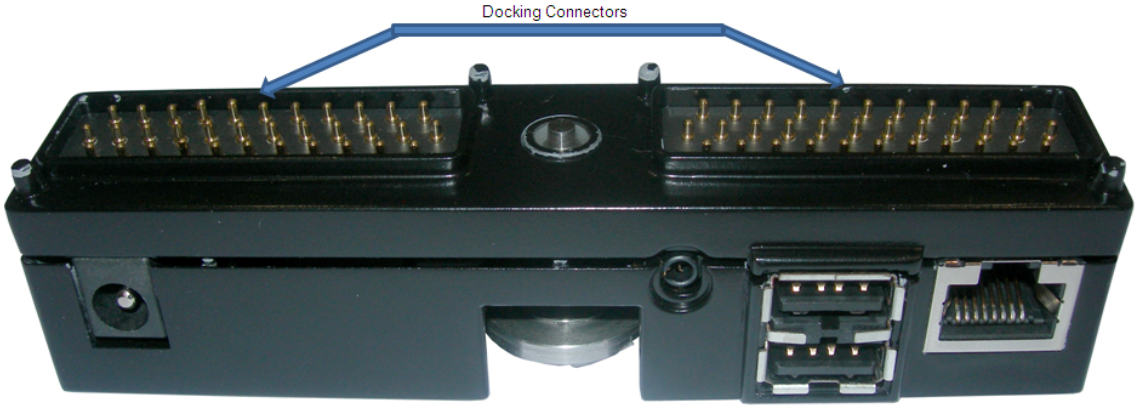


Figure 6-8 TC-100 Mini Port Replicator

6.1.11 TC-100 Attach Port Replicator

1. Turn off all power to the Port Replicator
2. Remove all cables
3. Undo the center locking screw
4. Remove Port Replicator in a straight movement. **Do not bend as that will damage the Port Replicators unique pins.**

6.1.12 TC-100 Remove Port Replicator

1. Push Port Replicator on to the Commanders pins. **Ensure it is the right way around.**

2. Tighten center locking screw. Use nominal tightness as over tightening will damage the Port Replicator.
3. Connect all cables as required.

6.1.13 TC-100 Stylus

The Commander's responsive touch screen and high-resolution LCD allow the device to function as a convenient tool for manipulating and navigating digital maps. The touch screen can be operated by gloved fingers or the use of a stylus. The unit comes equipped with two styli that are stored at the top of the backside of the Commander. The distinctive shape makes them effortless to access and replace when needed.

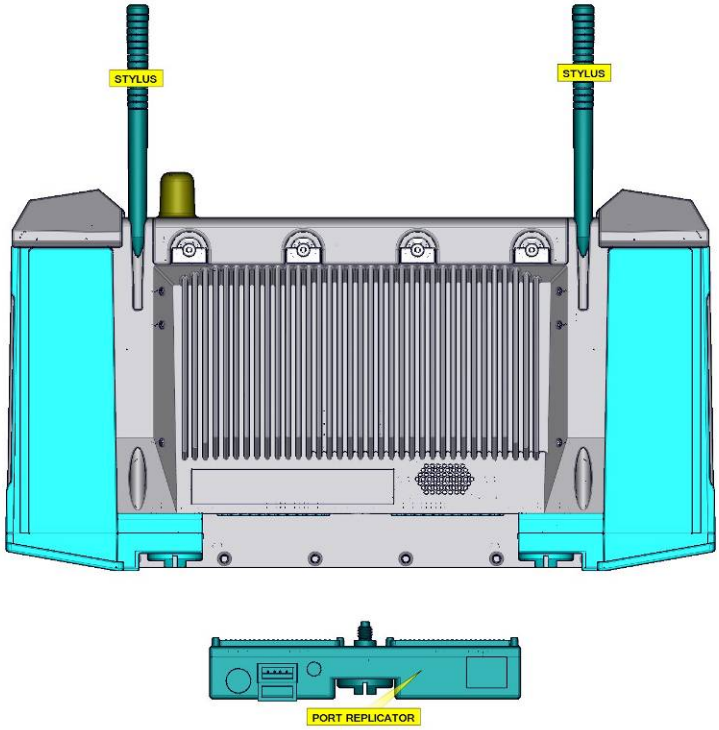


Figure 6-9 TC-100 Stylus and Port Replicator Removal

6.1.14 Battery Removal

The Dual Hot-Swappable 34Whr batteries with AC/DC Adapter (120VAC Input, 16VDC 4.0A Output) and an estimated battery life of 8hrs are removable by releasing the two (2) battery holdings screws and extracting the batteries downward out of their casings.

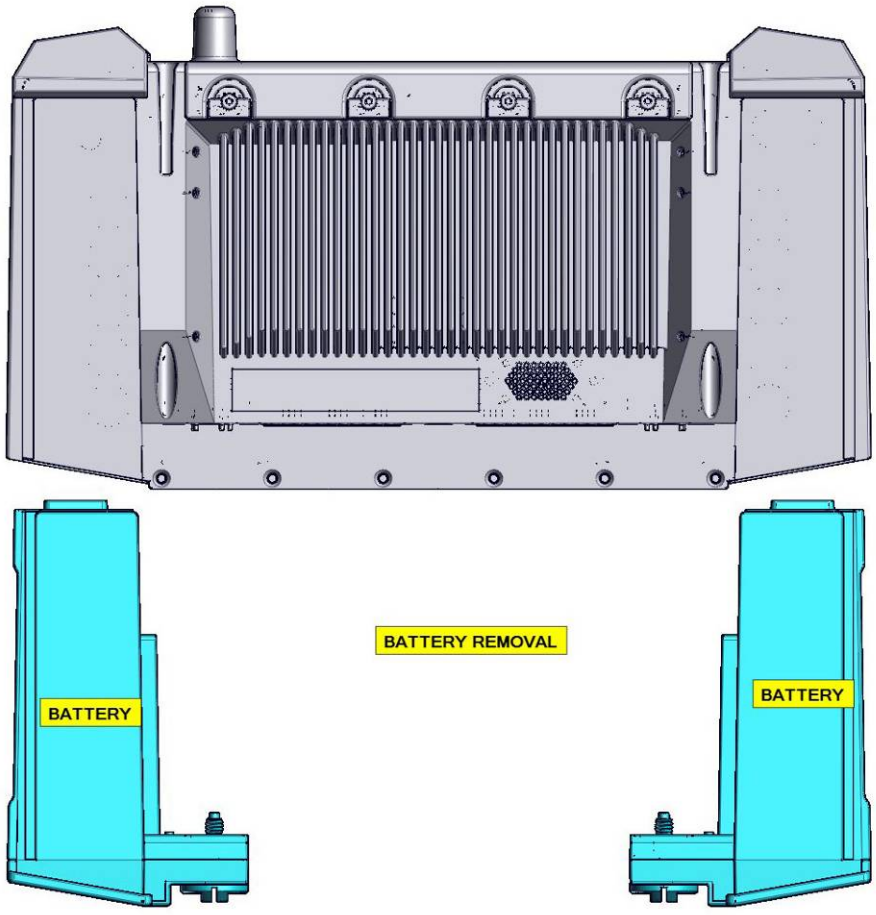


Figure 6-10 Batteries Removed From Commander

6.1.15 TC-100 GPS

For transmitting or receiving wireless data, the Commander is equipped by default with 802.11, Bluetooth, and GPS capabilities. The device can be further customized to support proprietary wireless communication protocols for relaying critical intelligence and reconnaissance data.

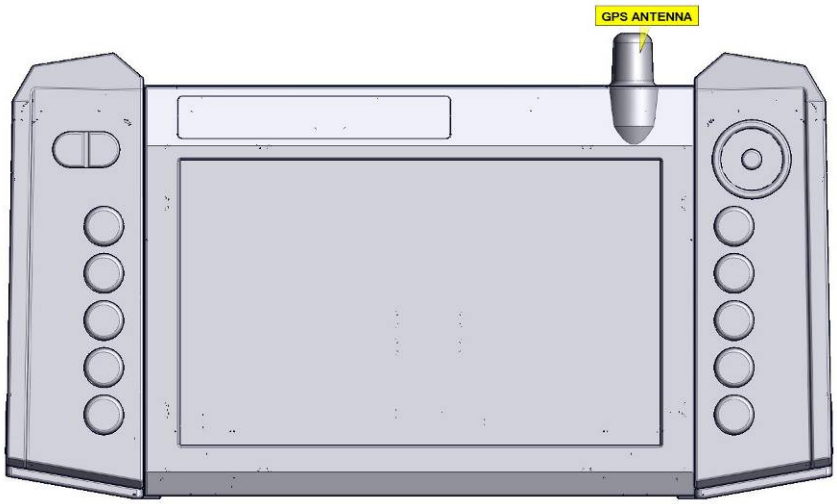


Figure 6-11 GPS Antenna Location

6.1.16 TC-100 Com Port Configuration

Figure 6-12 Main Screen

1. Select **GPSDIAG.exe** file as highlighted on the **Main Screen** and press **Enter**.(Figure 6-5).

Figure 6-13 GPSDiag.exe Icon.

2. On the **Diagnostics** screen scroll across to **Options** then on the **Drop Down Menu** scroll down to **General Options** and press **Enter.** (Figure 6-6.)

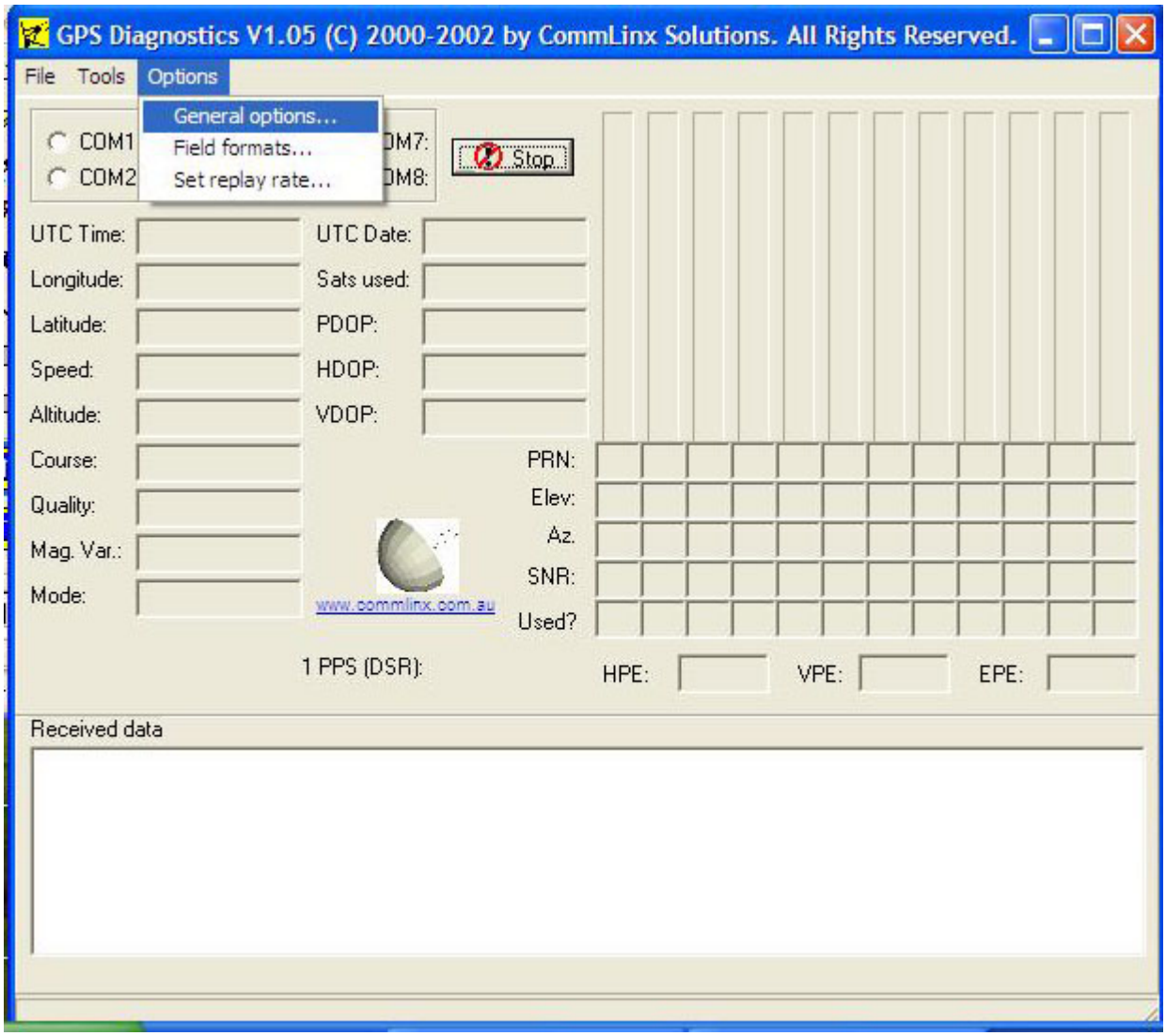


Figure 6-14 General Options Screen.

3. In the **General Options** Screen extend the **Baud Rate Menu** then scroll down and select 9600. Ensure **Relative Time Stamp** is checked then press **OK**. (Figure 6-7.).

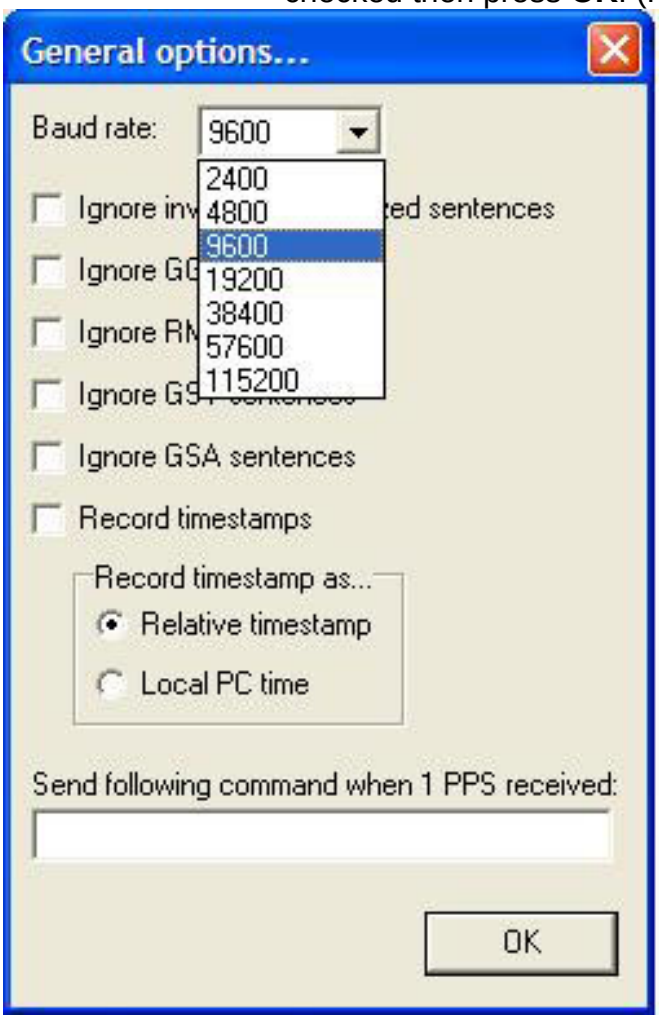


Figure 6-15 Baud Rate Menu

4. In the **GPS Diagnostics** screen select **COM2**. This command will automatically set up your system. (Figure 6-8.)

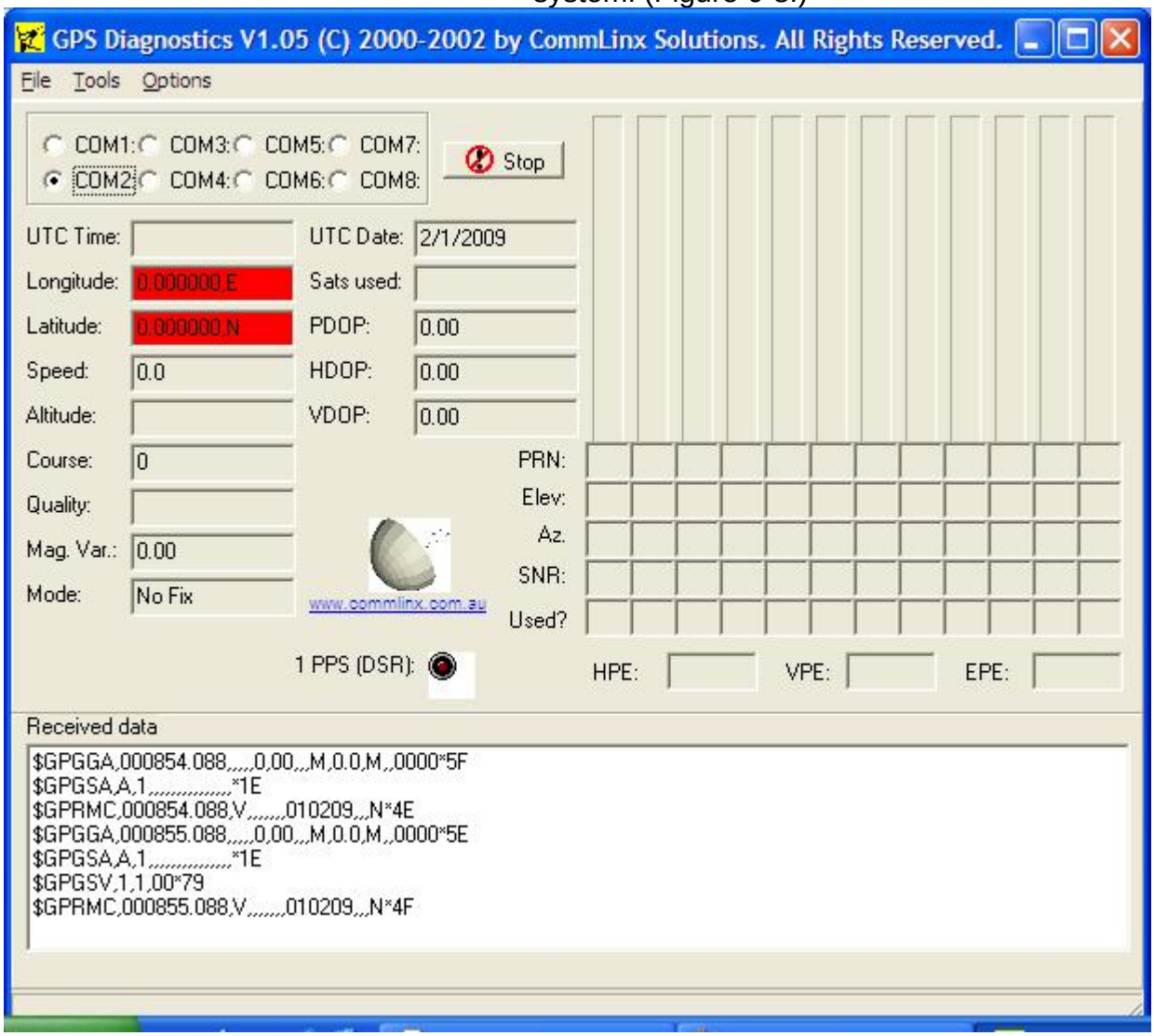


Figure 6-16 COM2 Selected

5. Press **Enter** to save your settings and **Exit**.

7 Identifying Components Using Device Manager

The Device Manager is one of Windows' most useful diagnostic tools. It lets you see all of the devices attached to your computer, and which resources they are each using. To access the Device Manager do the following:

1. Click **Start**, point to **Settings**, and then click **Control Panel**. (Figure 7-1).

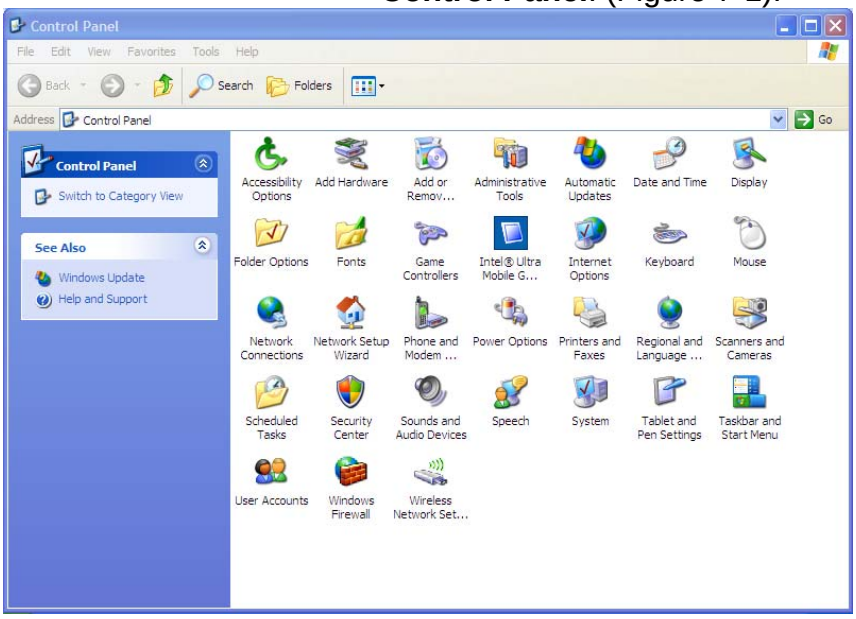


Figure 7-1 Control Panel

2. Double-click the **System** icon in the **Control Panel** page to open system properties. (Figure 7-2).

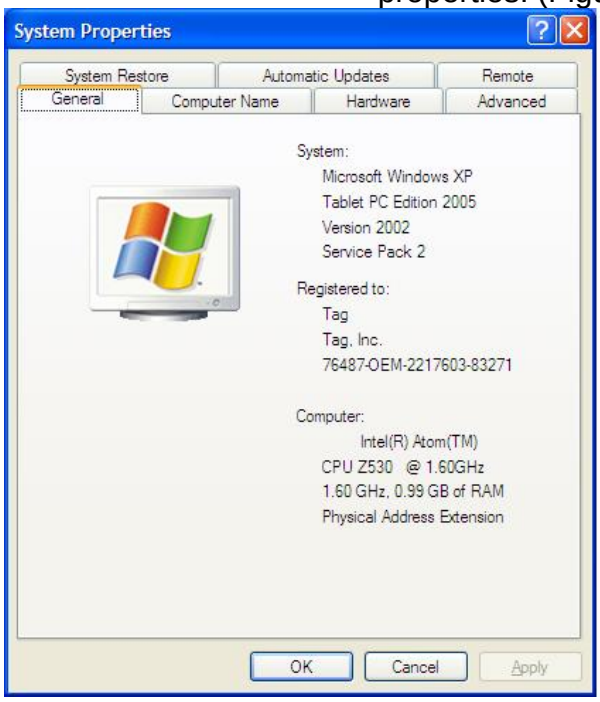


Figure 7-2 System Properties

3. Click the **Hardware** tab, and then click the **Device Manager** button. (Figure 7-3).

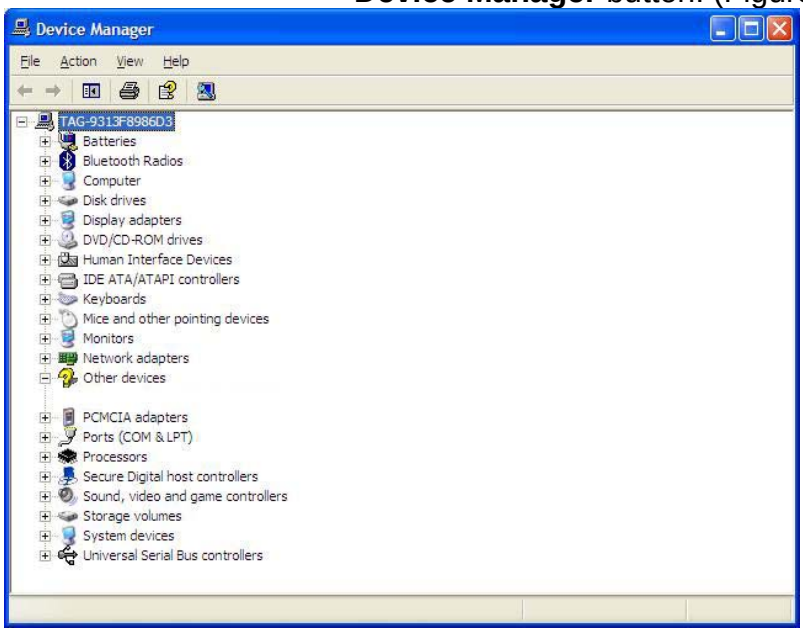


Figure 7-3 Device Manager

After opening Device Manager, you will see a list of all the devices Windows detected on your system. The Device Manager display is recreated each time the computer is started, or whenever a dynamic change to the computer configuration occurs, such as addition of a new device while the system is running.

NOTE: ***To include hidden devices, on the View menu, click Show hidden devices. A check mark next to Show hidden devices indicates hidden devices are showing. Click it again to clear the check mark. Hidden devices include non-PnP devices and devices that have been physically removed from the computer but have not had their drivers uninstalled.***

The devices shown represent the computer's current hardware configuration information. Any non-functioning devices are displayed with an exclamation point, indicating that a problem exists with the device; disabled devices are displayed with a small red "x" over the icon.

You can use Device Manager to enable or disable devices, troubleshoot devices, update drivers, use driver rollback, and change resources such as interrupt requests (IRQs) assigned to devices.

7.1.1 Working with Device Properties

To display a device's properties do the following:

1. Access the Device Manager as described in steps 1 through 3. (Figure 7-4).

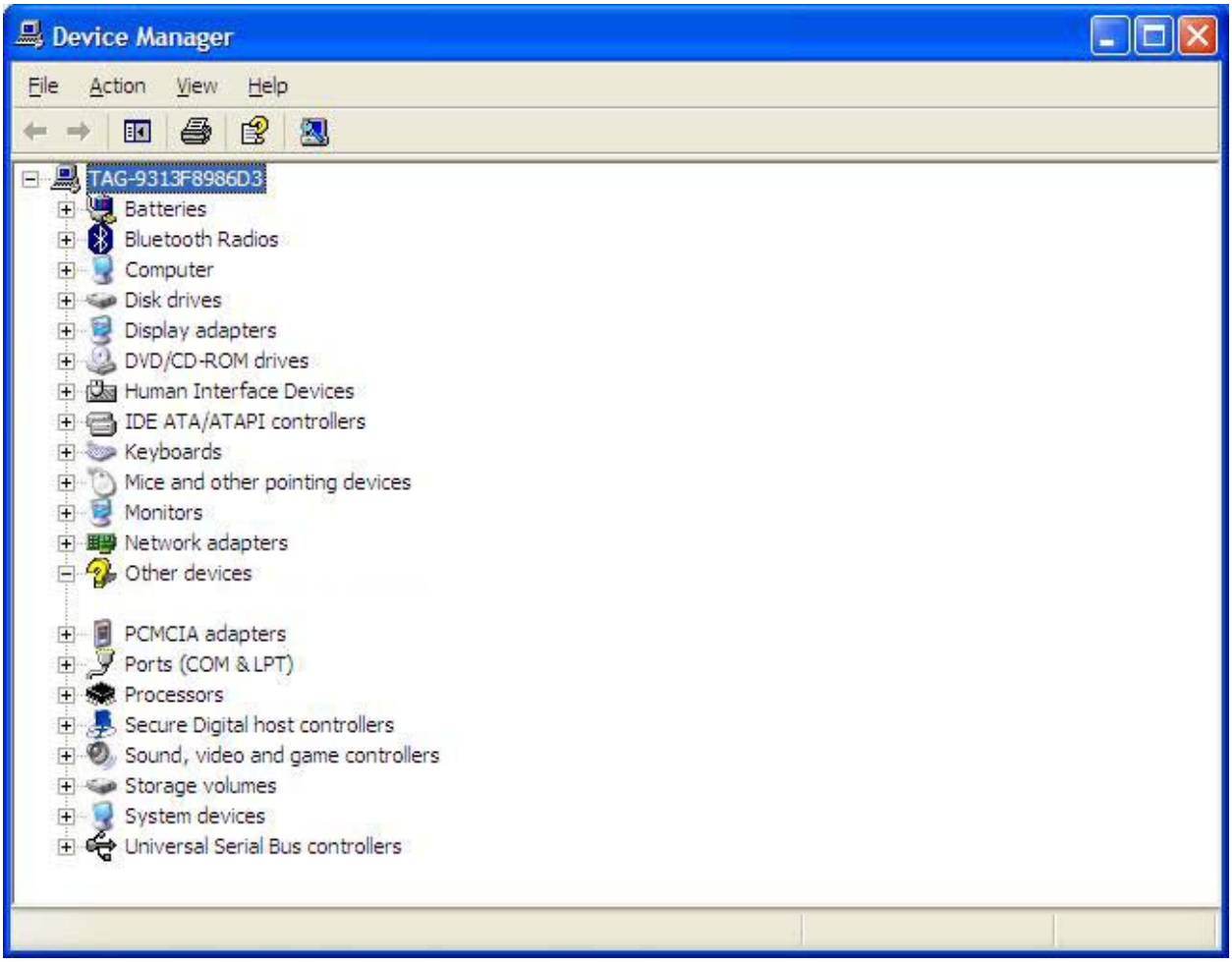


Figure 7-4 Device Manager

2. In the **Device manager** dialog box (Figure 7-5), double-click the device, or select the device and then click the **Properties** toolbar button.

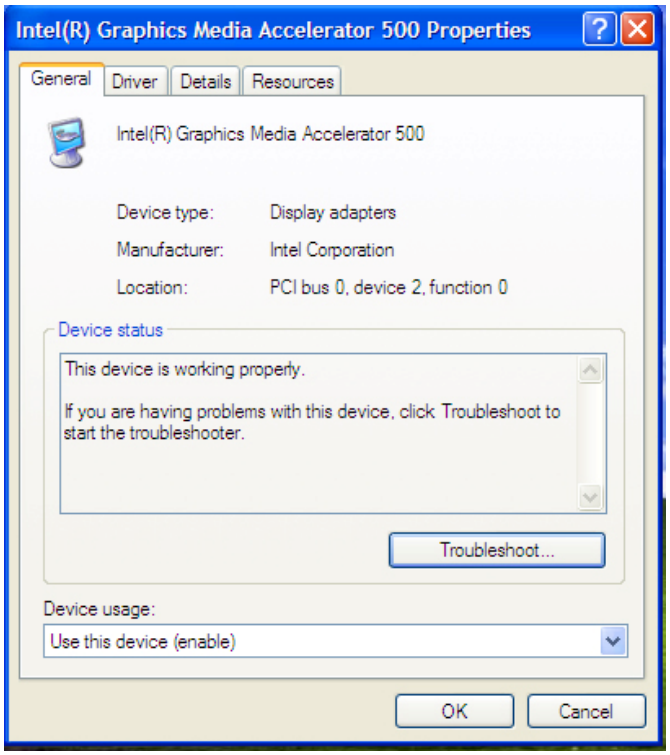


Figure 7-5 Properties Dialog Box

In the device's Properties dialog box, there might be several tabs. You can view the status and configuration information, as well as the device manufacturer, device type, and location in the upper portion of the General tab.

The Device status box in the middle of the General tab displays the status of the device, including any errors. If the device has any problems, the Device Status box briefly describes the problem, and usually describes the appropriate course of action to correct the problem.

3. Click **Troubleshoot...** to use the built-in mechanisms for detecting the nature of the problem.

   Other tabs include the Driver tab, which displays the details of the driver being used. This tab also lets you update or uninstall the driver. The Resources tab displays the hardware resources being used. This tab allows you to see and resolve any conflicts caused by non-PnP devices. Along with these tabs, some devices have additional advanced settings or tabs for device-specific settings.

7.2 Installing and Removing Hardware in Windows

Plug and Play (PnP) is a standard that makes installing new hardware devices easier. Prior to PnP, installing new hardware meant finding and installing peripheral drivers and making sure the new device didn't conflict with another device. Theoretically, if you have a computer designed for PnP and are using a PnP operating system (like Windows), installing a printer, sound card, modem, or other peripheral is a simple matter of plugging in the device.

It's not always quite this simple. Assuming you are using a PnP computer, when you attach a PnP device, you may see a message indicating that Windows has recognized the new device-either immediately or the next time you start up your system. If Windows needs a driver that is not currently installed, you may at that point be asked to insert a disk or the Windows CD-ROM. If you don't see a message but the device appears to be working, you can assume that everything is fine.

7.2.1 Using the Add New Hardware Wizard

If the device is not working properly, try using the Add New Hardware Wizard. To run this wizard, do the following:

1. From the **Start** menu, point to **Settings** and then click **Control Panel**. (Figure 7-6).

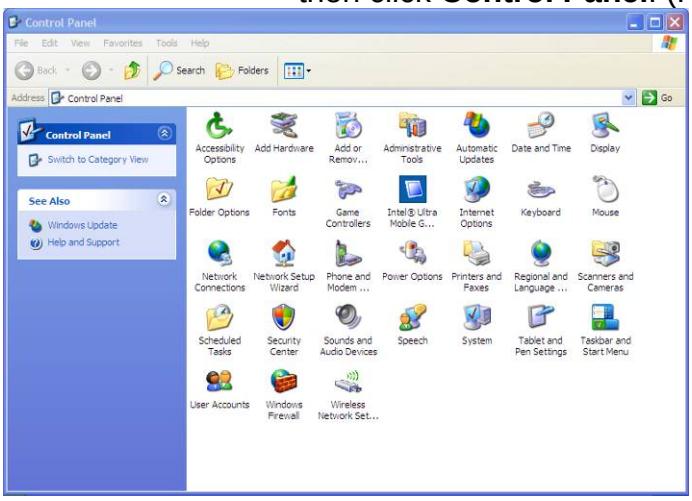


Figure 7-6 Control Panel

2. Double-click the **Add Hardware** icon. (Figure 7-7).

Add Hardware Wizard
Welcome to the Add Hardware Wizard
This wizard helps you:
• Install software to support the hardware you add to your computer.
• Troubleshoot problems you may be having with your hardware.
If your hardware came with an installation CD, it is recommended that you click Cancel to close this wizard and use the manufacturer's CD to install this hardware.
To continue, click Next.
< Back
Next >
Cancel

Figure 7-7 Add Hardware Wizard

7.3 Installing Legacy Peripherals

When you install what Microsoft calls a legacy peripheral, you will need to use the Add Hardware Wizard, as described to let Windows know about the new device.

7.3.1 Removing Legacy Peripherals

When removing a legacy peripheral from your system, you need to let Windows know that the device is gone. This enables Windows to reuse the resources (places in memory and internal communications channels) that it previously allocated to that device.

To tell Windows that you have removed a legacy device, perform the following steps:

1. From the **Start** menu, point to **Settings** and then click **Control Panel**. (Figure 7-8).

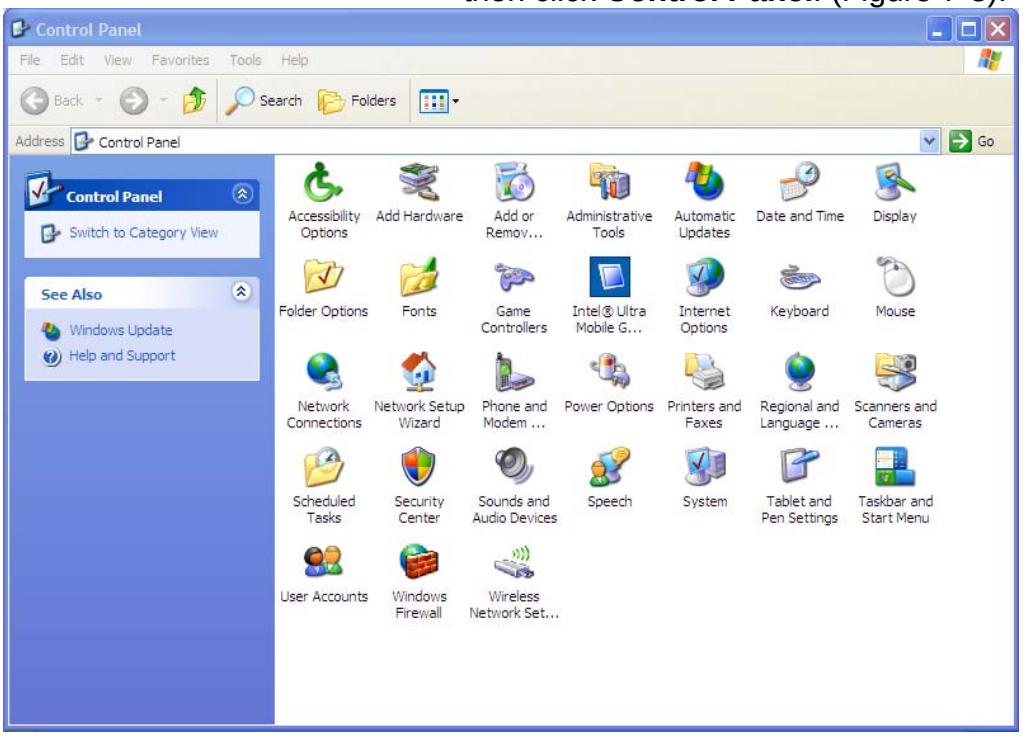


Figure 7-8 Control Panel

2. Double-click the **System** icon. (Figure 7-9).

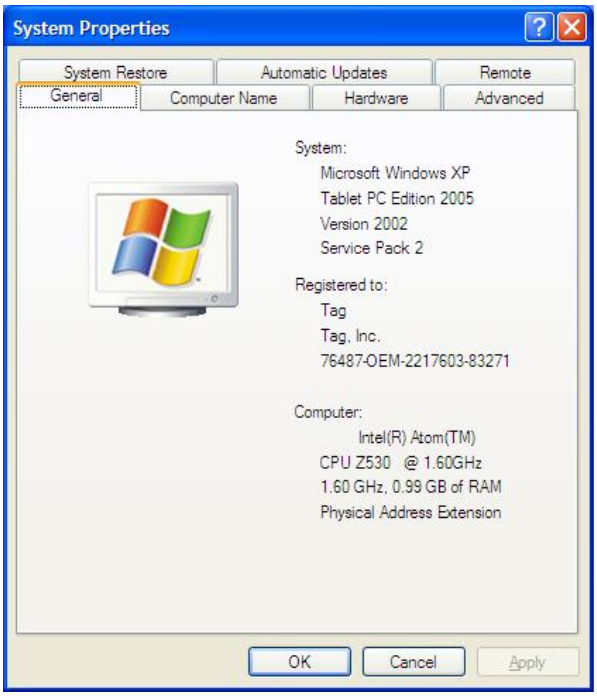


Figure 7-9 System Properties

3. Click the **Hardware** tab.
4. Click the **Device Manager** button. (Figure 7-10).

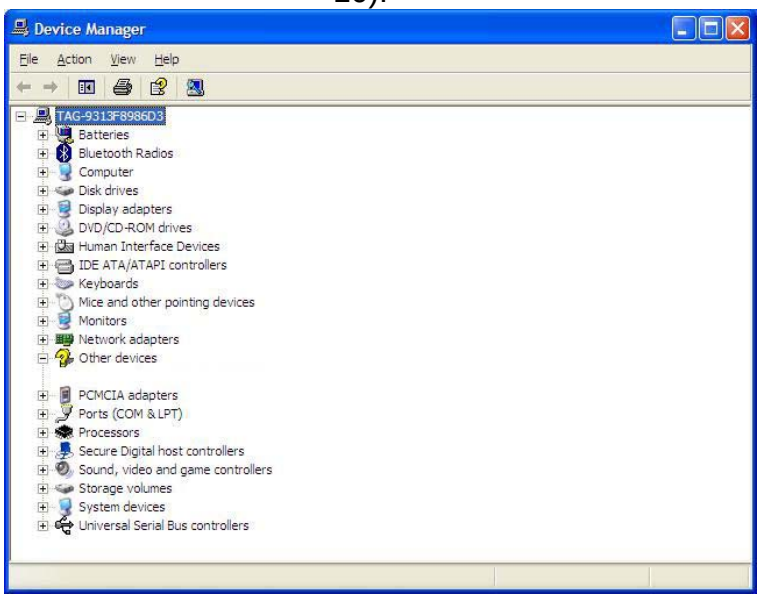


Figure 7-10 Device Manger

5. Click the **name** of the item you have removed from your system. If you don't see the item, look for a category heading that describes the type of device you removed, and then click the plus sign to its left to display a list of items in that category.
6. From the **Action** menu, click **Uninstall**.
7. Click **OK**.

8 BIOS

8.1.1 TAG Approved BIOS

The BIOS (basic input/output system) is the program stored on the CMOS that the Commander uses to get the system started after you turn it on. The BIOS also manages data flow between the computer's operating system and attached devices such as the hard disk, video adapter, and mouse.

CAUTION: ***The BIOS installed on your server was loaded and tested with all the devices initially installed in your system. If you desire to have the BIOS updated, consult TAG technical support in advance as updates to your approved BIOS may cause your system to become unstable or inoperable.***

8.1.2 Common BIOS Settings

8.1.2.1 Access BIOS

1. Connect an external Key Board by a **USB** port.
2. Power **UP** the “Commander”.
3. Once the system is powered up hit the **DEL** Key until the **BIOS** appears.
4. Verify the settings by scrolling through the **BIOS** then on the upper right hand side of the screen select **Save Changes** and Exit.
5. The same result can be obtained by using the short cut keys. Hit **ESCAPE** a number of times to bring up a screen where you can either accept or reject any changes.

8.1.2.2 Upgrade BIOS

WARNING: ADVICE TO UPGRADE YOUR BIOS CAN BE OBTAINED FROM CUSTOMER SERVICE AT TAG.COM.

GENERIC BIOS UPGRADE

1. Move BIOS files to a bootable media (User Defined).
2. Power **UP** the “Commander”.
3. Boot the TC-100 with an external USB keyboard. Press F11 to choose the BBS Pop-Up.
4. Choose the USB stick you inserted.
5. Follow the instructions as detailed by **TAG Customer Service.**

8.1.2.3 COM / Serial Port

The Commander has two serial ports. (One (1) on the Port Replicator and one (1) on the Commander) In the BIOS you can assign COM1/COM2/COM3/COM4 to serial port 1 or 2.

Most BIOS' also allow you to set the I/O and IRQ but this is mostly done automatically.

8.1.2.4 Hard Drives

Most modern BIOS' allow automatic detection of disk parameters. The settings can be individually configured for the primary master and slave device and the secondary master and slave device.

8.1.2.5 Boot Sequence

This setting is used to control the order that the BIOS uses during the boot process to look for a boot device from which to load the operating system.

8.1.2.6 Date and Time

The Date and Time is set in the BIOS, stored in CMOS, and maintained by CMOS battery.

8.1.2.7 Plug and Play BIOS

Today's BIOS' are Plug and Play (PnP)-aware. This means they are able to automatically assign resources such as IRQ and DMA to PnP devices.

Information about PnP devices is stored in a separate area of non-volatile CMOS memory, called the Extended System Configuration Database (ESCD). Both the PnP BIOS and the operating system can access this area and communicate with each other about resource settings assigned to PnP devices as well as non-PnP devices. For example, when a fixed interrupt request (IRQ) is manually assigned to a particular device using Device Manager, Windows will write this information to the ESCD on shutdown thereby preventing the BIOS from assigning the same IRQ to a PnP device at startup.

You can also reserve IRQs for non-PnP devices in the CMOS setup, this will prevent the BIOS from assigning these reserved resources to PnP devices, a common example is a legacy sound card that needs IRQ 5.

8.1.2.8 Power Management

Modern motherboards provide Advanced Configuration and Power Management Interface (ACPI) settings such as wake-up, power button function and standby/suspend timers. These functions are configured in the CMOS Setup.

8.1.3 AMI BIOS 08.00.15

1. After hitting **Delete** when computer is booting you will be taken to the **Main BIOS System Utility** screen. (Figure 8-1)

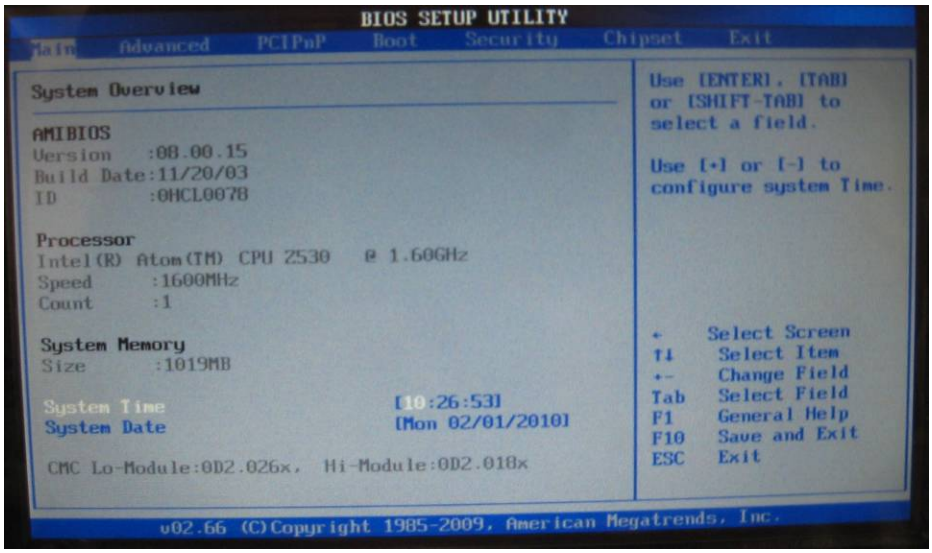


Figure 8-1 Main BIOS Screen

2. Scroll across to the **Advancement** tab and press **Enter.** Select CPU Configuration and press **Enter**. (Figure 8-2.)

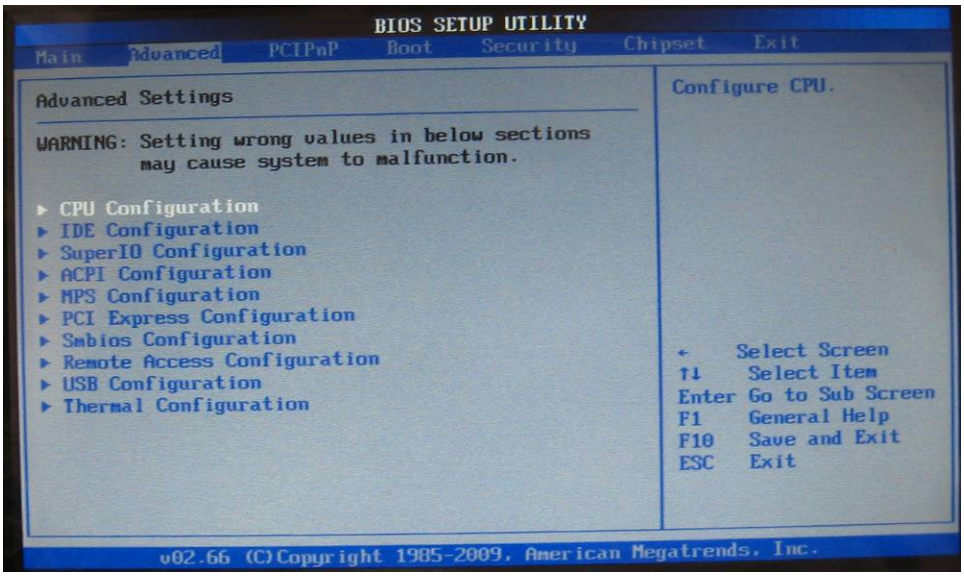


Figure 8-2 CPU Configuration

3. **Configure Advanced CPU Settings** screen. (Figure 8-3.)

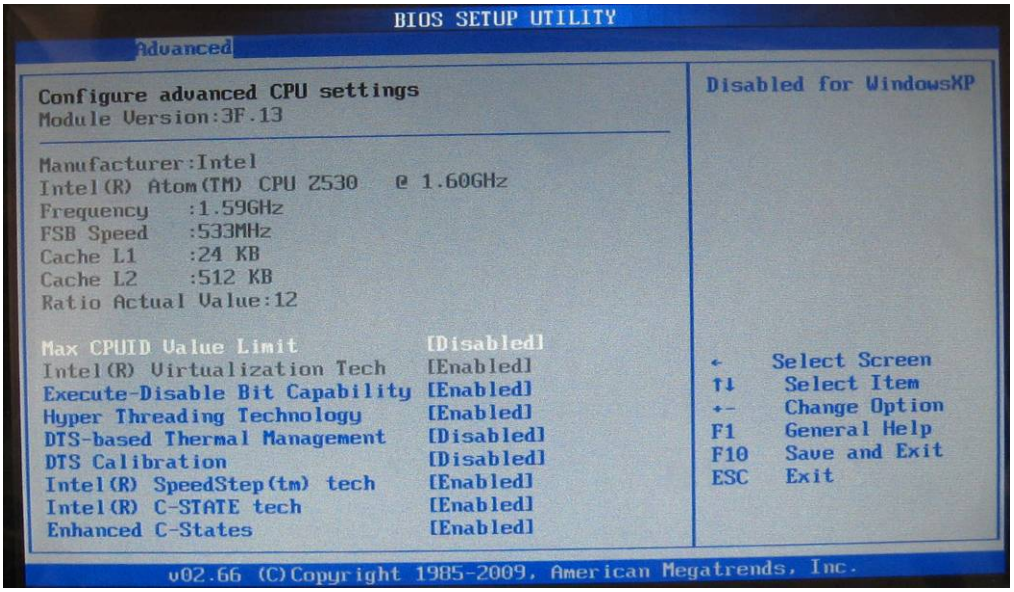


Figure 8-3 Configure Advanced CPU Settings Screen (Top Half).

4. On the **Configure Advanced CPU Settings** screen scroll down and **Disable DTS Calibration**. Press **Enter**. (Figure 8-4.)

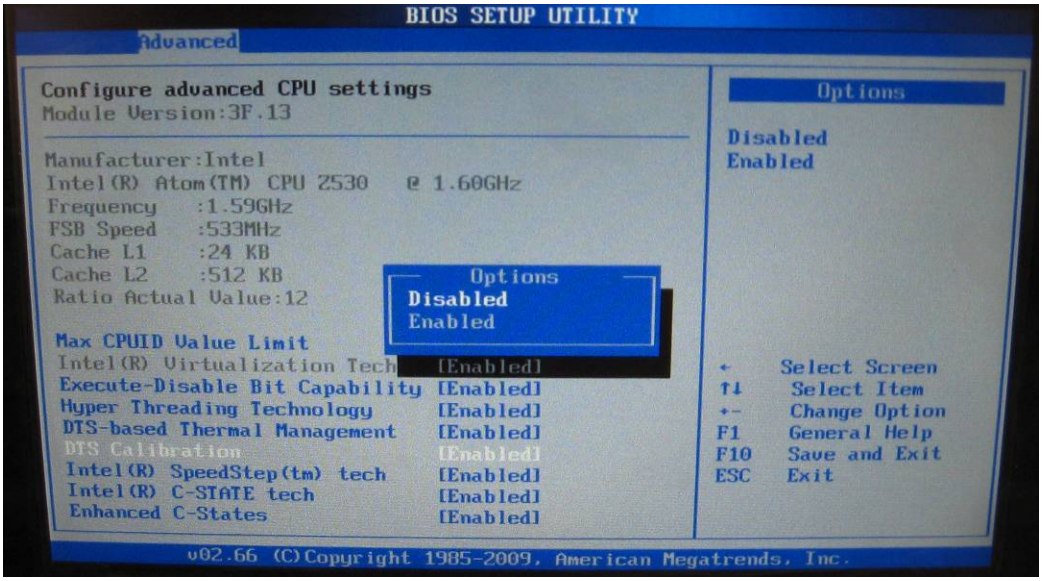


Figure 8-4 Configure Advanced CPU Settings Screen.

5. On the **Configure Advanced CPU Settings** screen scroll down to **Disable DTS Based Thermal Management**. Press **Enter** (Figure 8-4.)

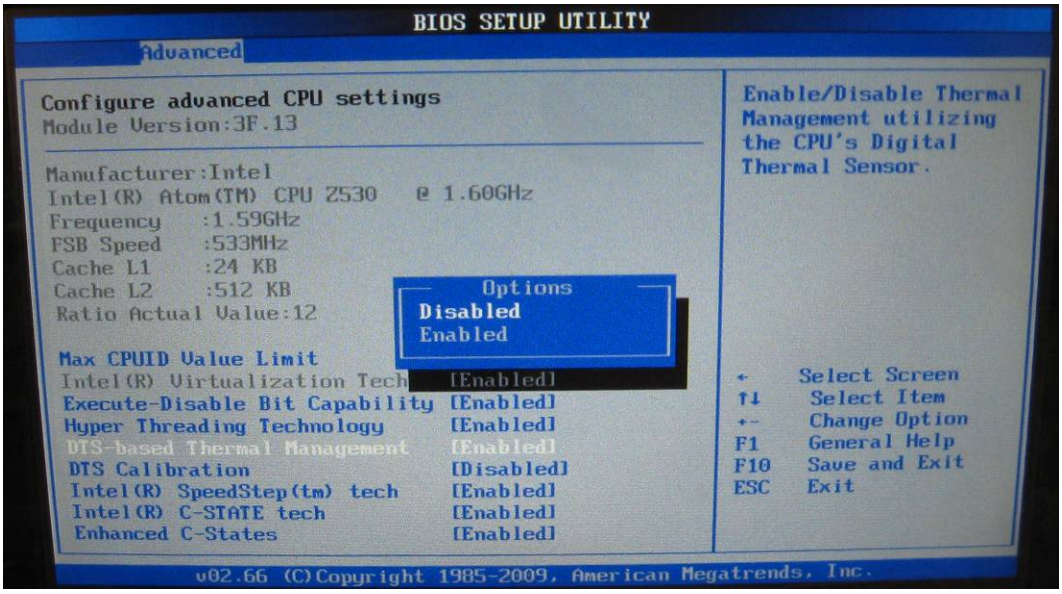


Figure 8-5 Disable DTS Based Thermal Management.

6. **Max CPUID Value Limit** screen **No Change** (Figure 8-4.)

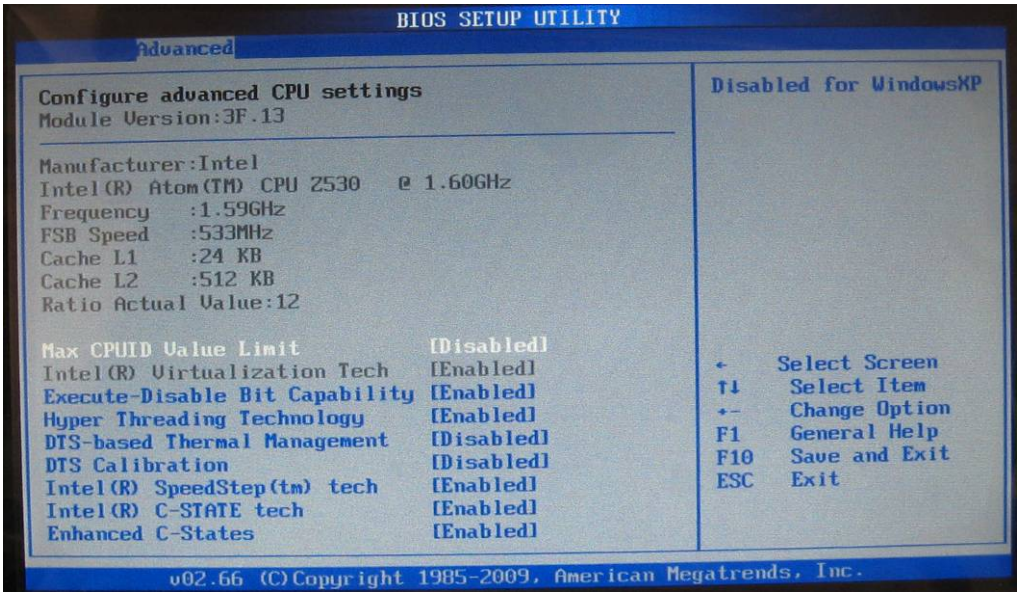


Figure 8-6 Max CPUID Value Limit Screen.

7. **Max C State** screen. **No Change.** Press **Escape** to return to the **Main Menu**. (Figure 8-7.)

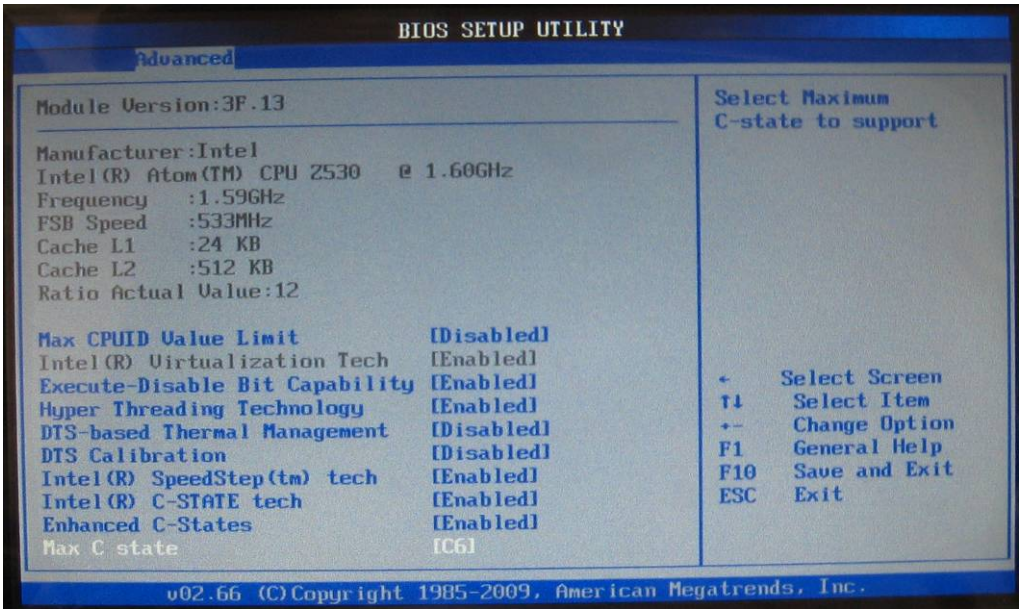


Figure 8-7 Max C State Screen.

8. On the **Main Menu** screen scroll down to **IDE Configuration.** Press **Enter.** (Figure 8-8.)

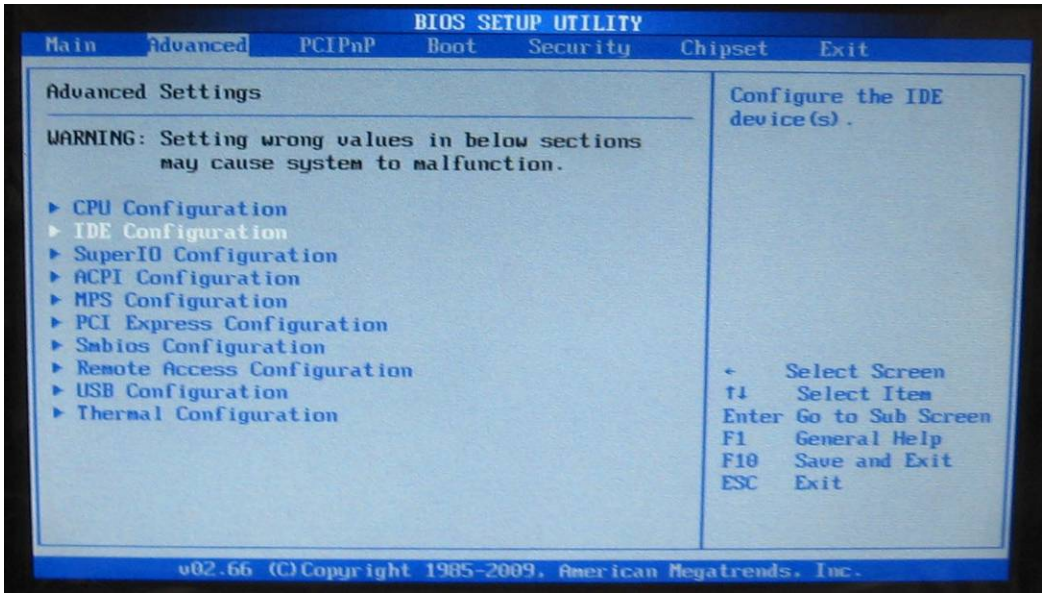


Figure 8-8 IDE Configuration

9. **ATI/IDE Configuration. No Change.** Press **Escape** to return to the **Main Menu.** (Figure 8-9.)

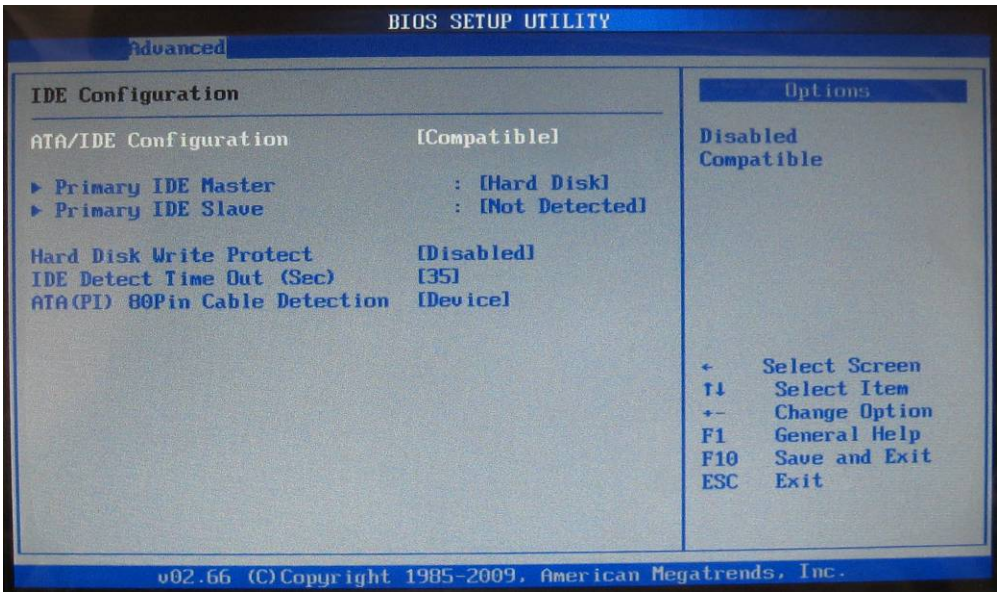


Figure 8-9 ATA/IDE Configuration

10. On the **Main Menu** screen scroll down to **Super IO Configuration.** Press **Enter. (Figure 8-10.)**

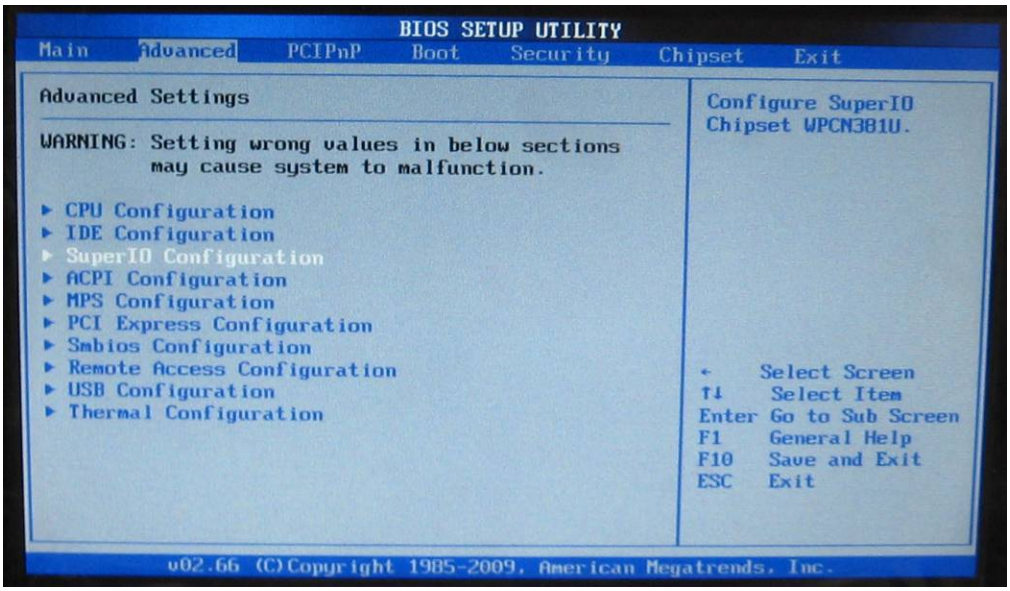


Figure 8-10 Super IO Configuration.

11. **Serial Port 1 Address. No Change.** Press **Escape** to return to the **Main Menu** (Figure 8-11.)

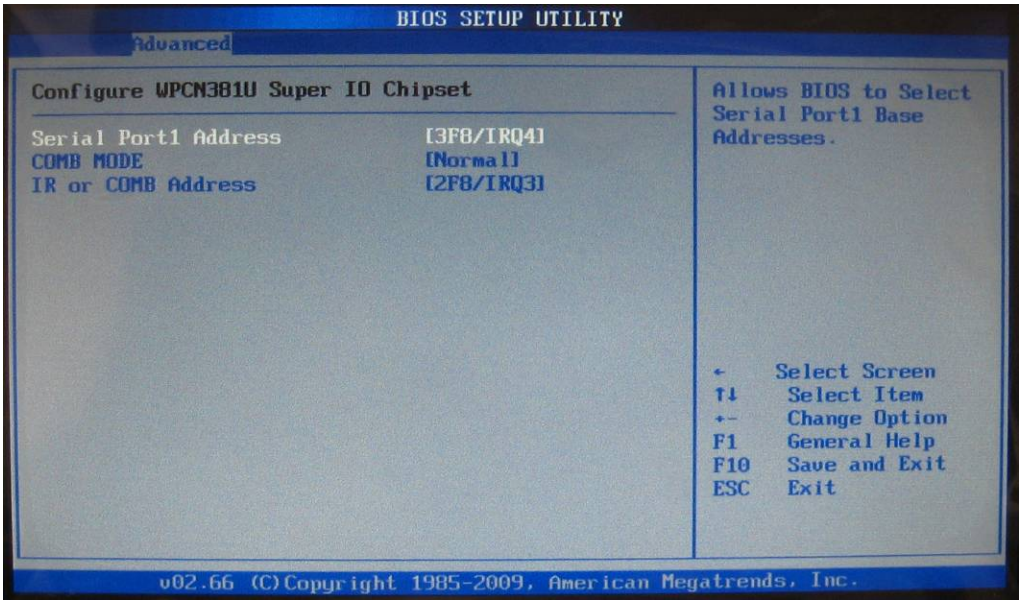


Figure 8-11 Serial Port 1 Address Screen.

12. At the **Main Menu** scroll down to **ACPI Configuration**. Press **Enter**. (Figure 8-12.)

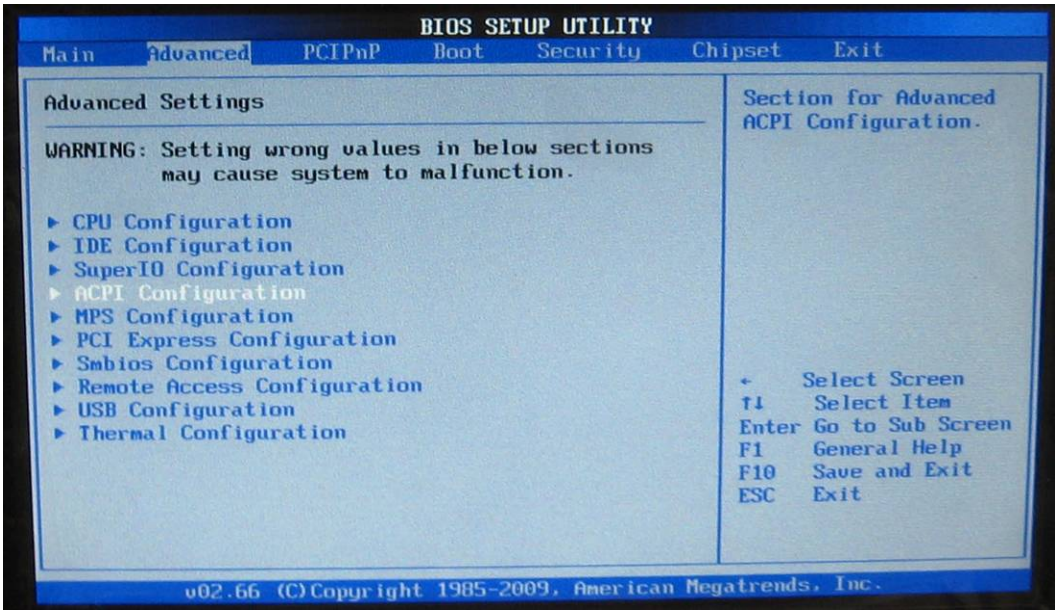

BIOS SETUP UTILITY
Main Advanced PCIPnP Boot Security Chipset Exit
Advanced Settings
WARNING: Setting wrong values in below sections may cause system to malfunction.
▶ CPU Configuration
▶ IDE Configuration
▶ SuperIO Configuration
▶ ACPI Configuration
▶ MPS Configuration
▶ PCI Express Configuration
▶ Smbios Configuration
▶ Remote Access Configuration
▶ USB Configuration
▶ Thermal Configuration
Section for Advanced ACPI Configuration.
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-12 ACPI Configuration Screen.

13. At the **ACPI Settings** screen press **General ACPI Configuration**. (Figure 8-13.)

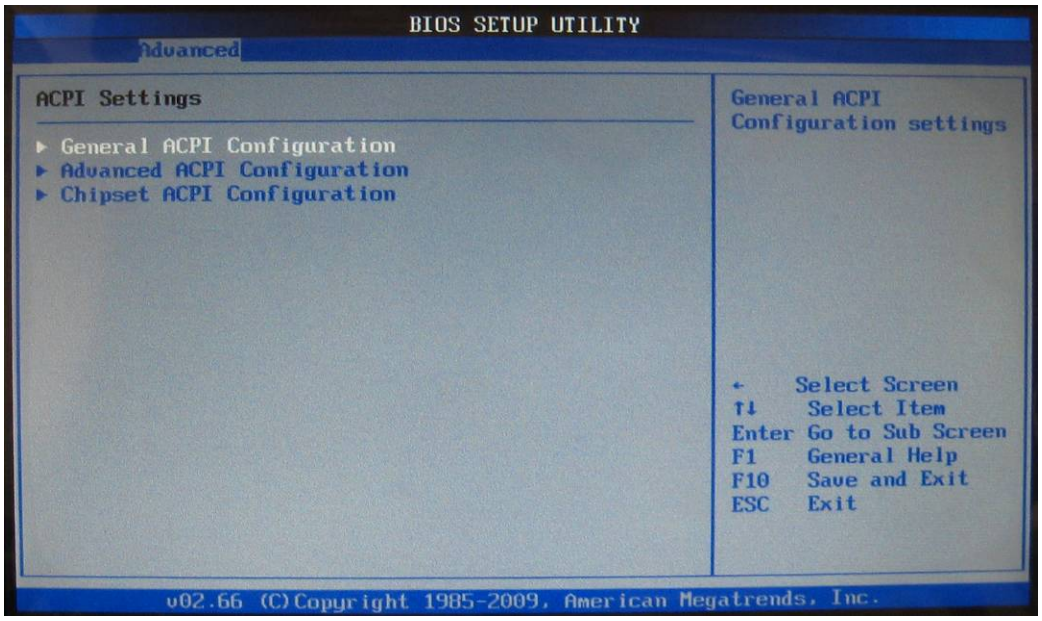


Figure 8-13 ACPI Version Features

14. At the **General ACPI Configuration** screen. Scroll down to Repost Video on S3 Resume. Press **Enter**.(Figure 8-14.)

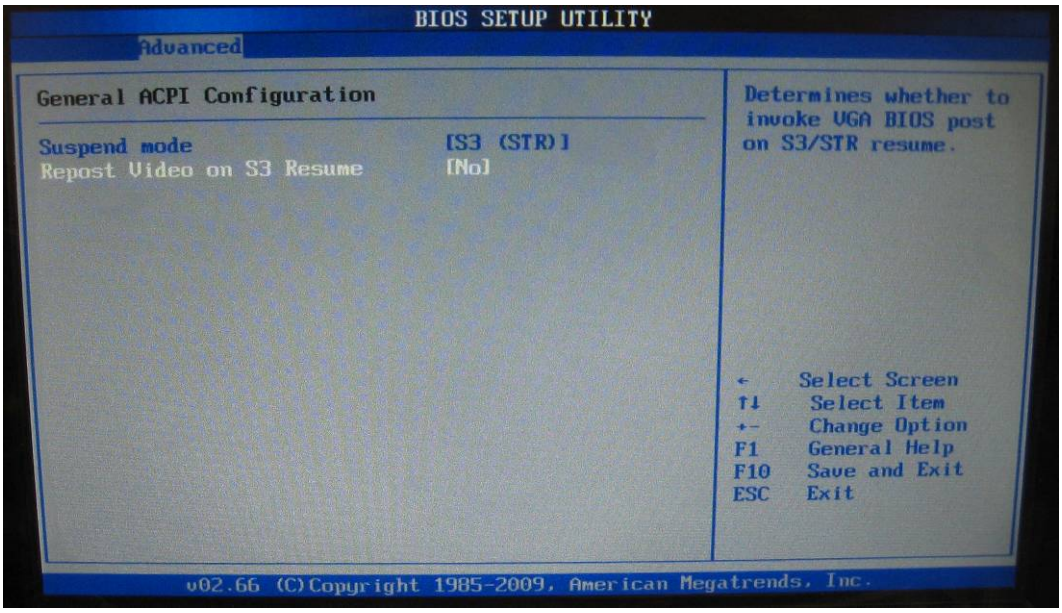


Figure 8-14 General ACPI Configuration.

15. At the Drop Down menu on the **General ACPI Configuration** screen select **YES** and press **Enter**(Figure 8-15.)

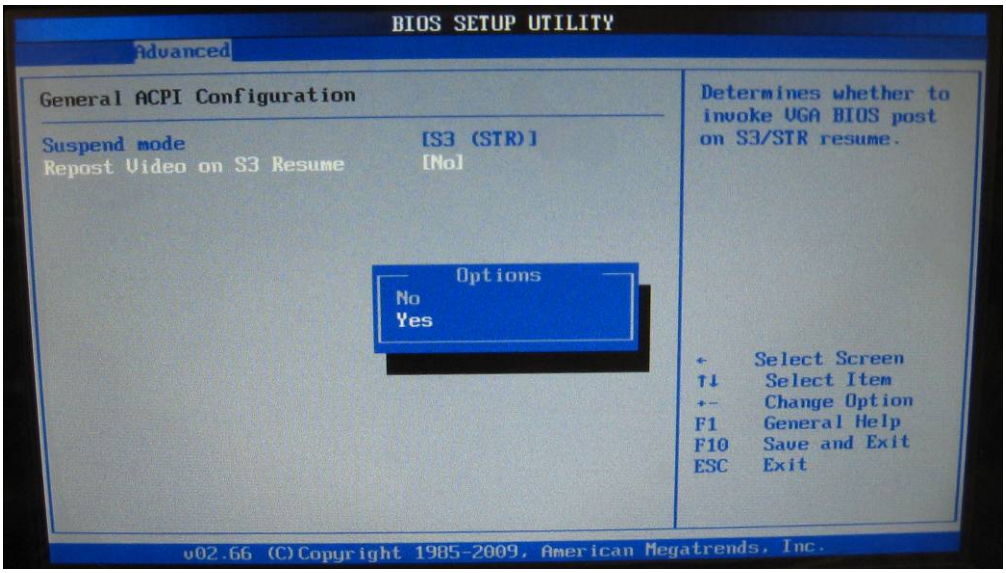


Figure 8-15 General ACPI Configuration Screen.

16. At the **General ACPI Configuration** screen. Scroll to Suspend Mode. No Change. Press **Escape**.((Figure 8-16.)

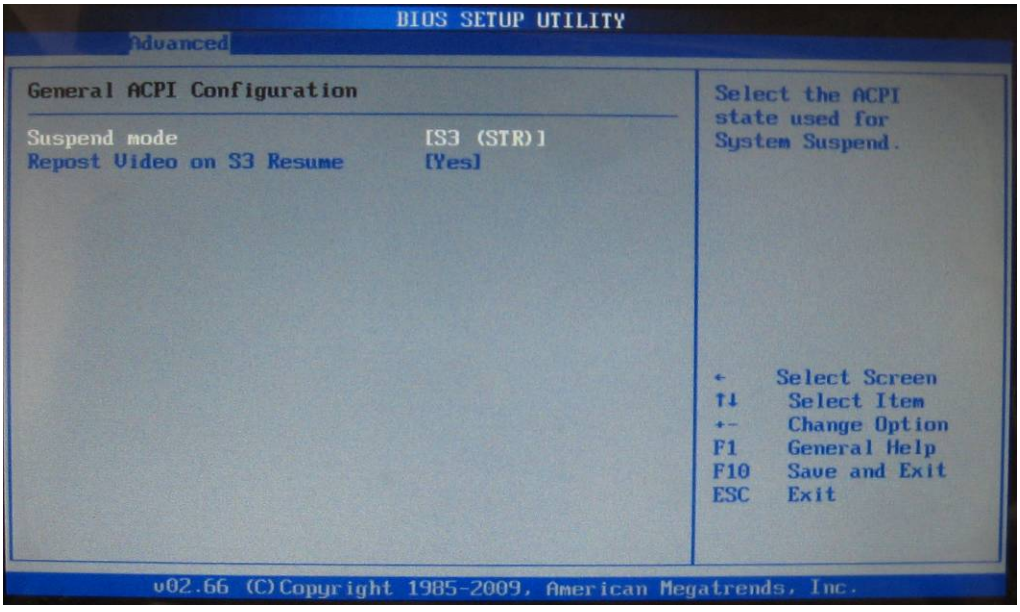


Figure 8-16 General ACPI Configuration.

17. At the **ACPI Settings** screen scroll down and select **Advanced ACPI Configuration**. Press **Enter**. (Figure 8-17.)

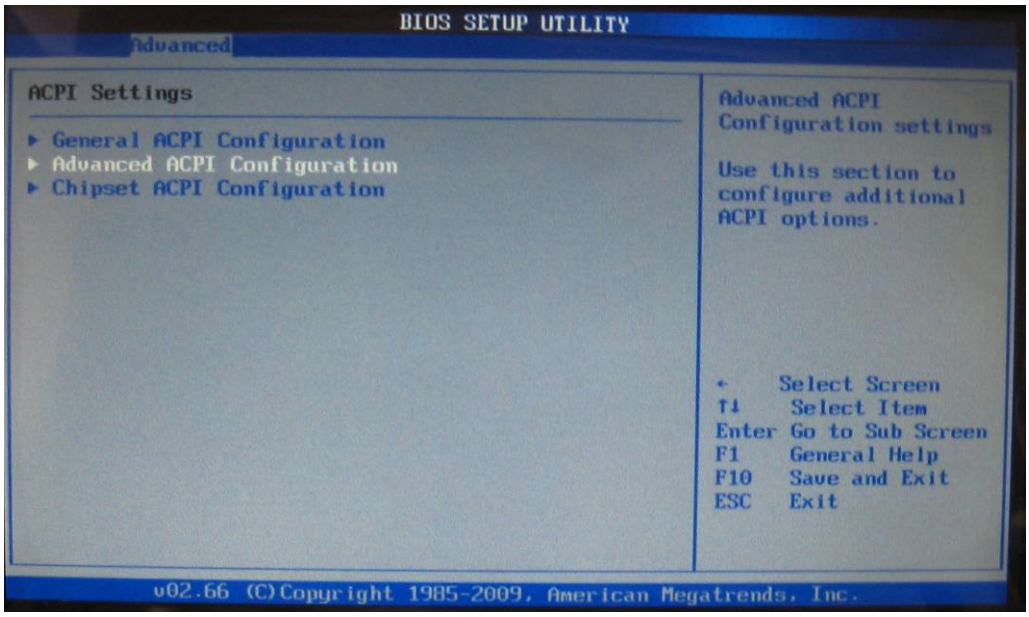


Figure 8-17 ACPI Settings Screen.

18. At the **Advanced ACPI Configuration** screen **No Change**. Press **Escape**. (Figure 8-18.)

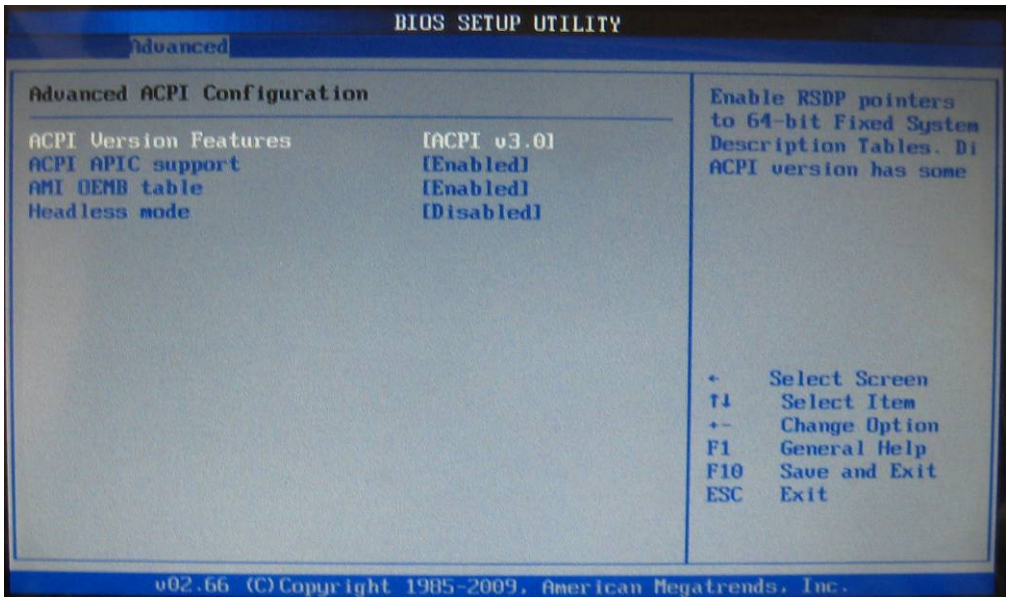

BIOS SETUP UTILITY
Advanced
Advanced ACPI Configuration
ACPI Version Features [ACPI v3.0]
ACPI APIC support [Enabled]
AMI OEMB table [Enabled]
Headless mode [Disabled]
Enable RSDP pointers to 64-bit Fixed System Description Tables. Di ACPI version has some
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-18 Advanced ACPI Configuration Screen.

19. At the **ACPI Settings** screen scroll down and select **Chipset ACPI Configuration**. Press **Enter**. (Figure 8-19.)

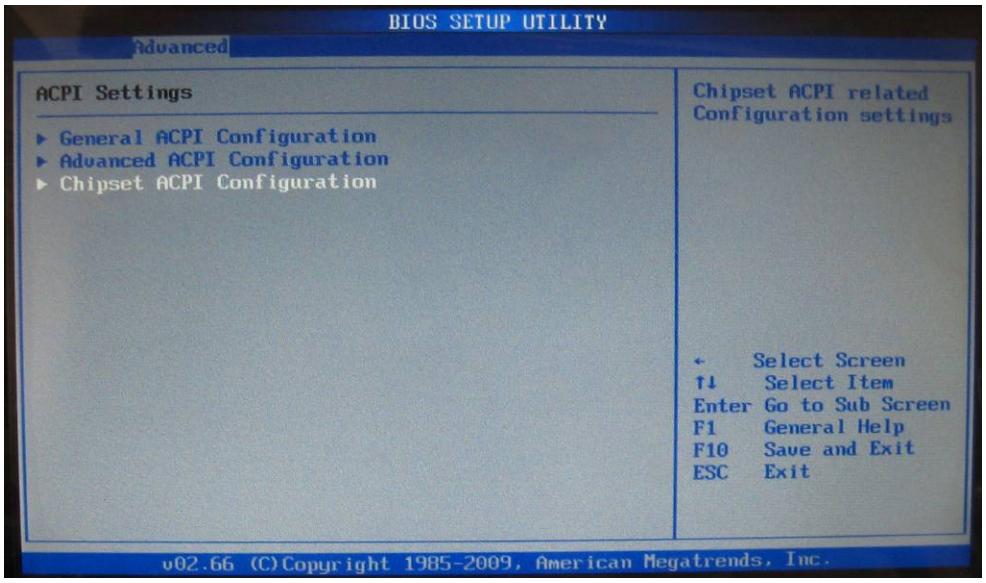


Figure 8-19 ACPI Settings Screen.

20. At the **South Bridge ACPI Configuration** screen. **No Change**. Press **Escape**. (Figure 8-20).

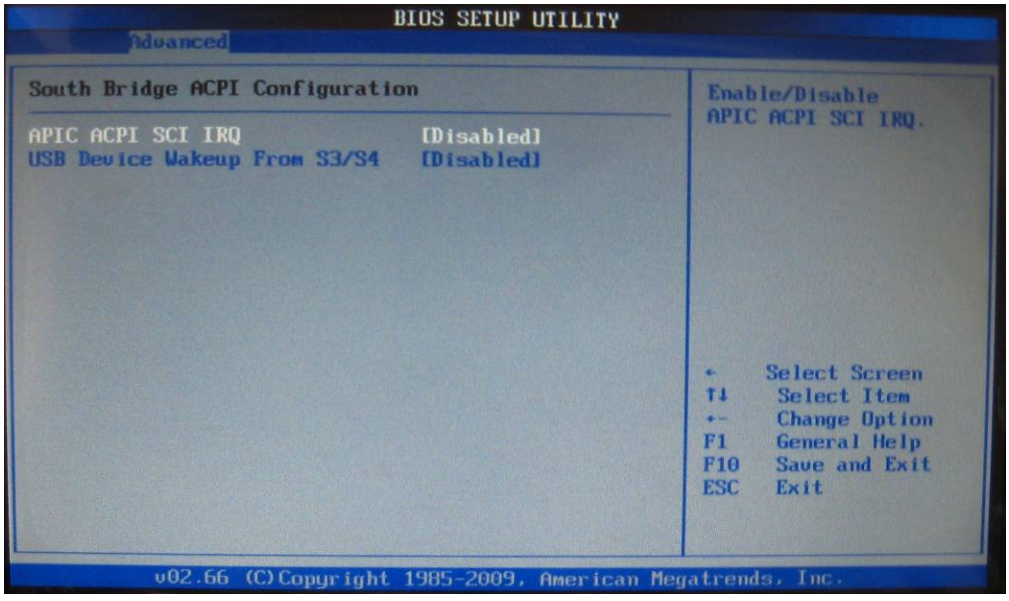


Figure 8-20 South Bridge ACPI Configuration Screen.

21. At the **Advanced Settings** screen scroll down and select **MPS Configuration**. Press **Enter**. (Figure 8-21).

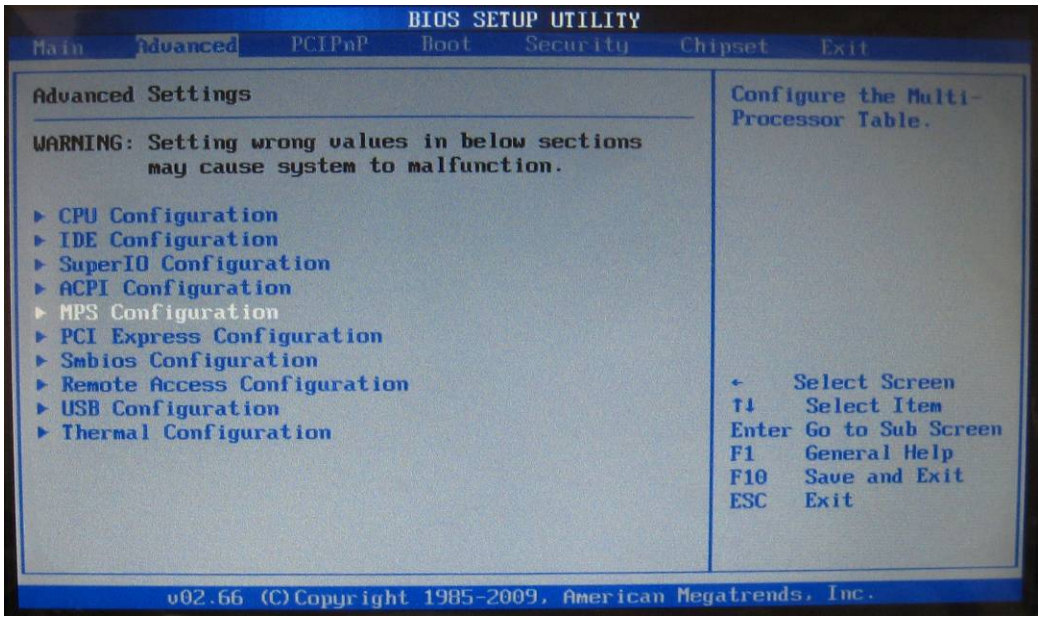


Figure 8-21 Advanced Settings Screen.

22. At the **MPS Revision screen. No Change.** Press **Escape.** (Figure 8-22.)

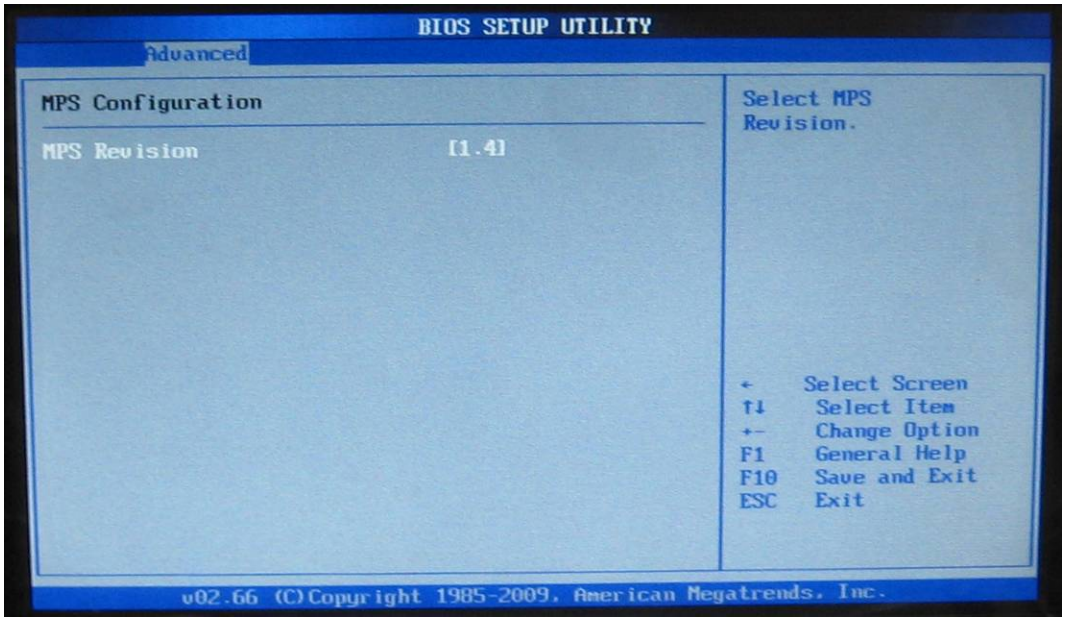


Figure 8-22 MPS Revision Screen.

23. At the **Advanced Settings** screen scroll down and select **PCI Express Configuration**. Press **Enter**. (Figure 8-23.)

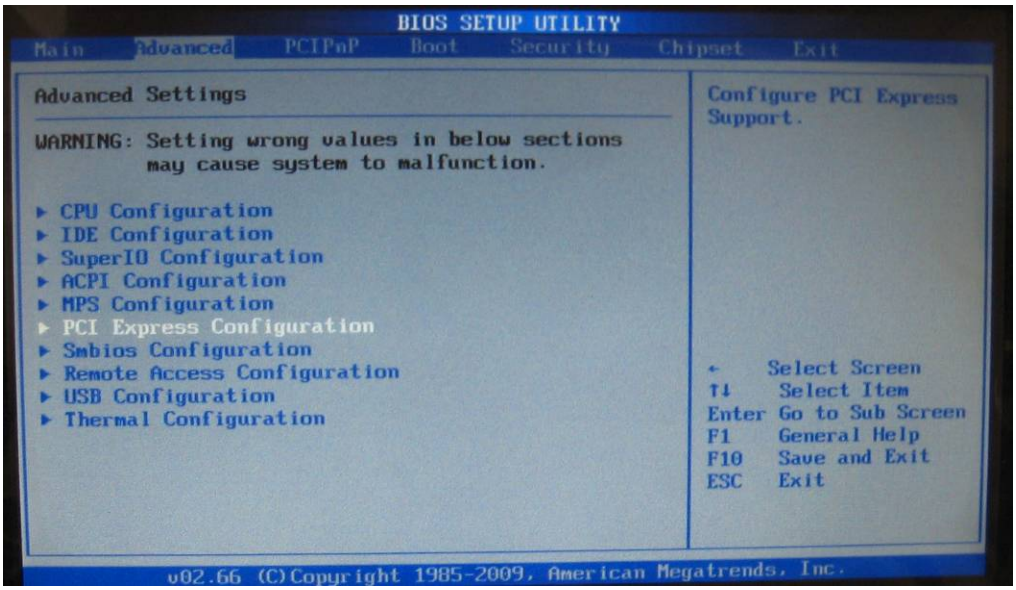


Figure 8-23 Advanced Settings Screen.

24. At the **PCI Express Configuration** screen. **No Change**. Press **Escape**. (Figure 8-24.)

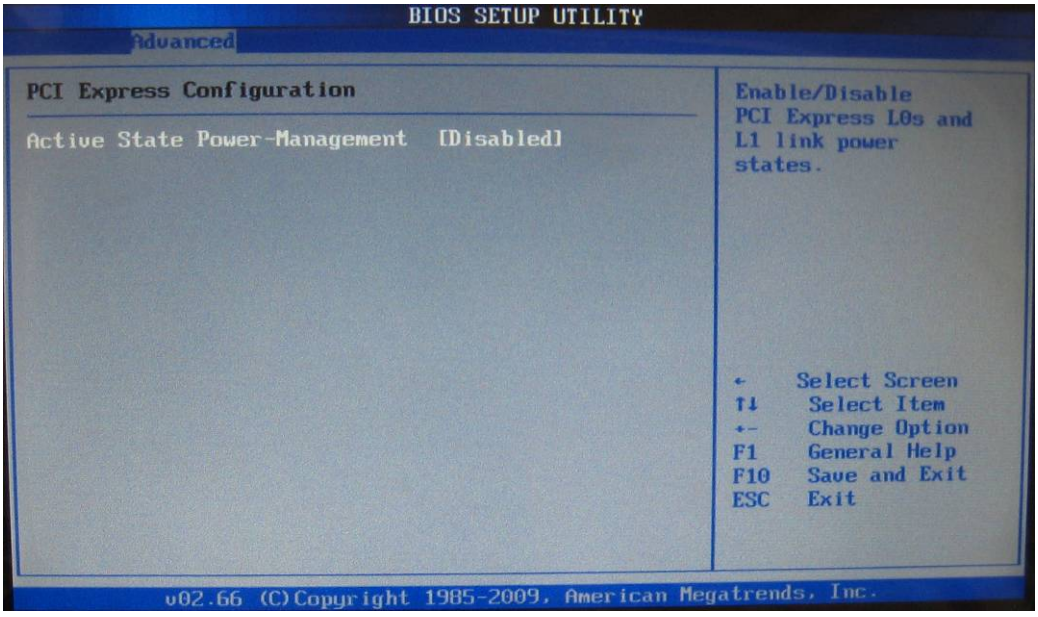


Figure 8-24 PCI Express Configuration Screen.

25. At the **Advanced Settings** screen scroll down and select **Smbios Configuration.** Press **Enter.** (Figure 8-25).

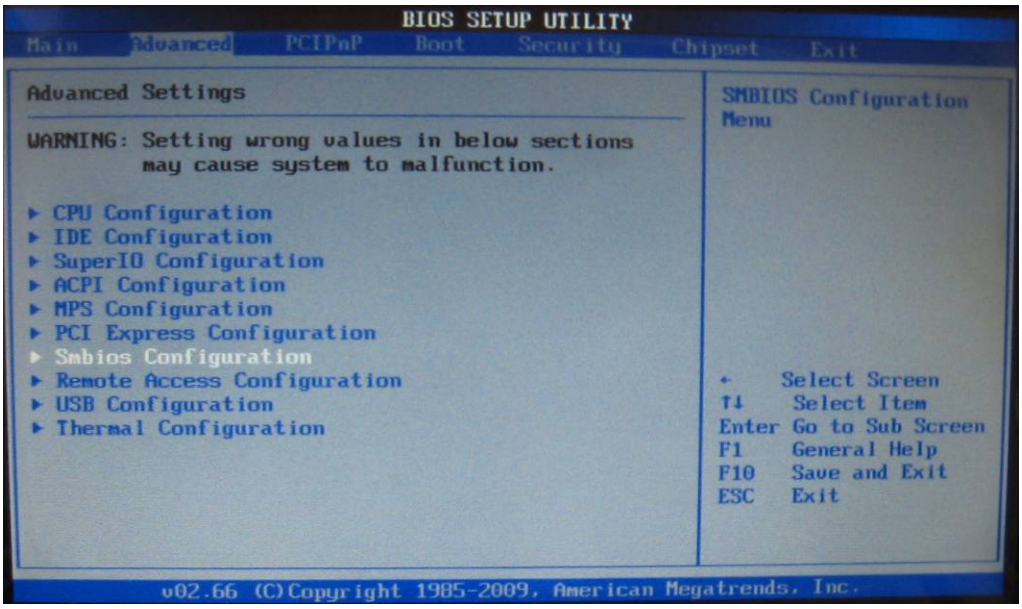


Figure 8-25 Advanced Settings Screen.

26. At the **Smbios Configuration** screen. **No Change**. Press **Escape**. (Figure 8-26.)

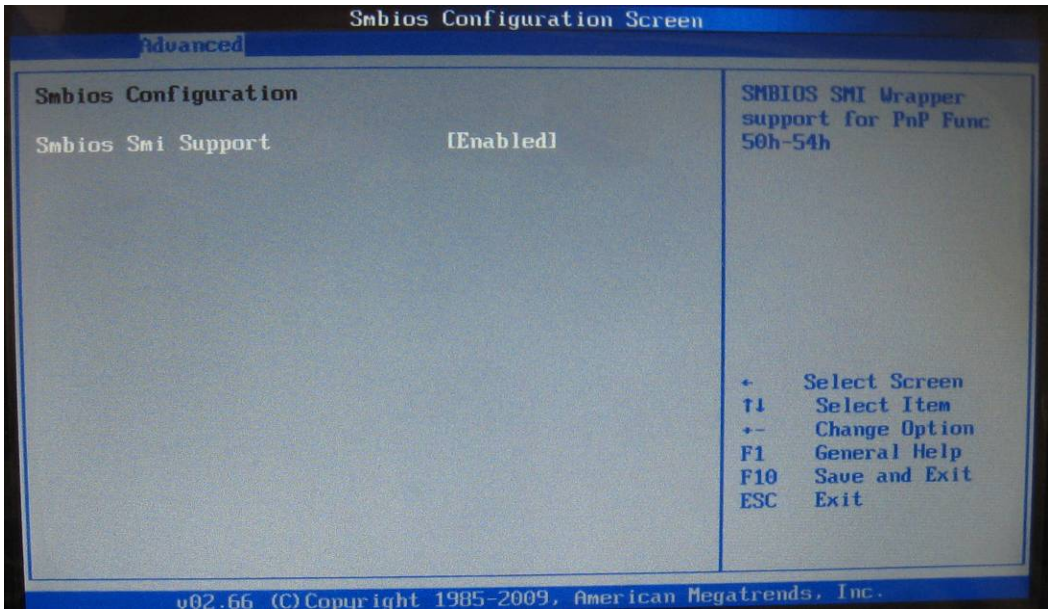


Figure 8-26 Smbios Configuration Screen.

27. At the **Advanced Settings** screen scroll down and select **Remote Access Configuration.** Press **Enter**. (Figure 8-27.)

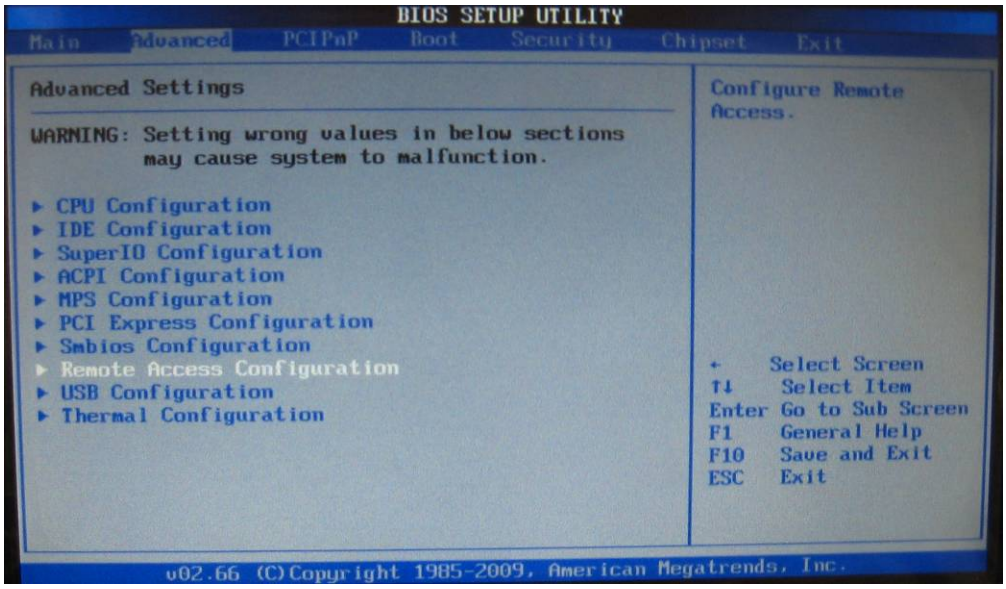


Figure 8-27 Advanced Settings Screen.

28. At the **Configure Remote Access Type and Parameters** screen. **No Change**. Press **Escape.** (Figure 8-28.)

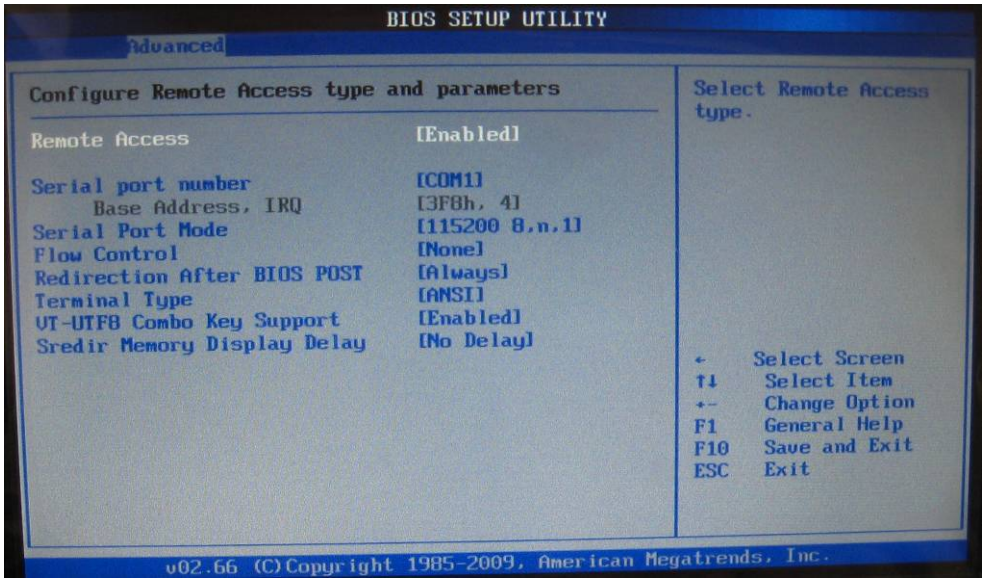


Figure 8-28 Configure Remote Access Type and Parameters Screen.

29. At the **Advanced Settings** screen scroll down and select **USB Configuration**. Press **Enter**. (Figure 8-29.)

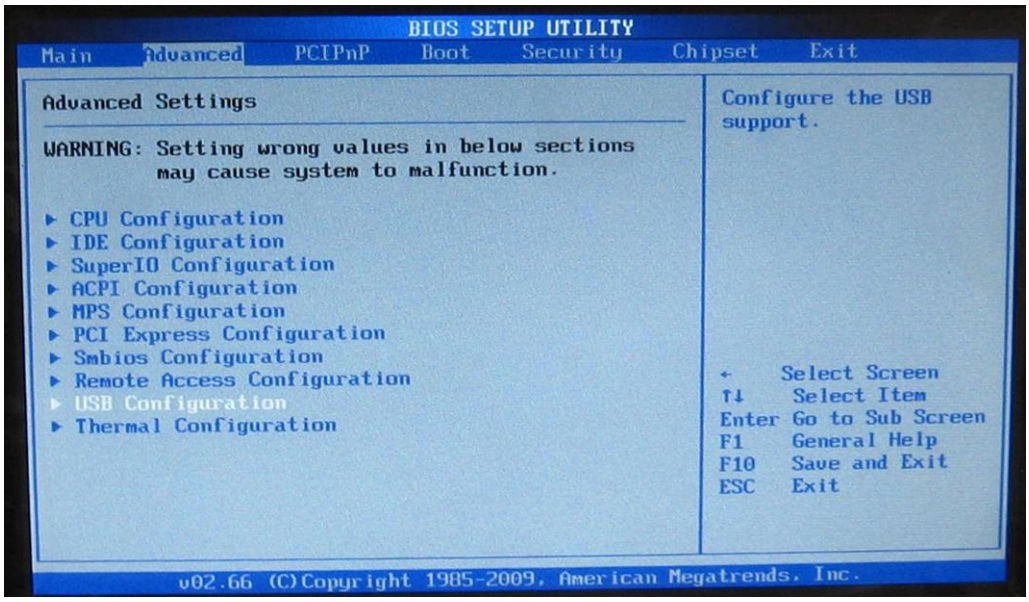


Figure 8-29 Advanced Settings Screen.

30. At the **USB Configuration** screen. **No Change**. Press **Escape**. (Figure 8-30.)

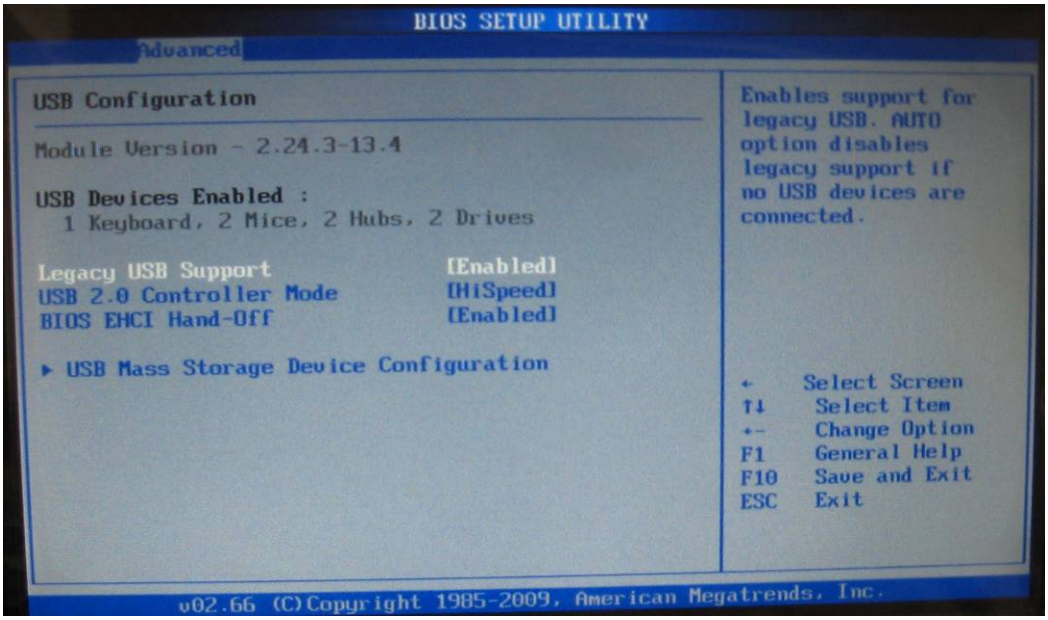

BIOS SETUP UTILITY
Advanced
USB Configuration
Module Version - 2.24.3-13.4
USB Devices Enabled :
1 Keyboard, 2 Mice, 2 Hubs, 2 Drives
Legacy USB Support [Enabled]
USB 2.0 Controller Mode [HiSpeed]
BIOS EHCI Hand-Off [Enabled]
▸ USB Mass Storage Device Configuration
Enables support for legacy USB. AUTO option disables legacy support if no USB devices are connected.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-30 USB Configuration Screen.

31. At the **Advanced Settings** screen scroll down to **Thermal Configuration**. Press **Enter**. (Figure 8-31.)

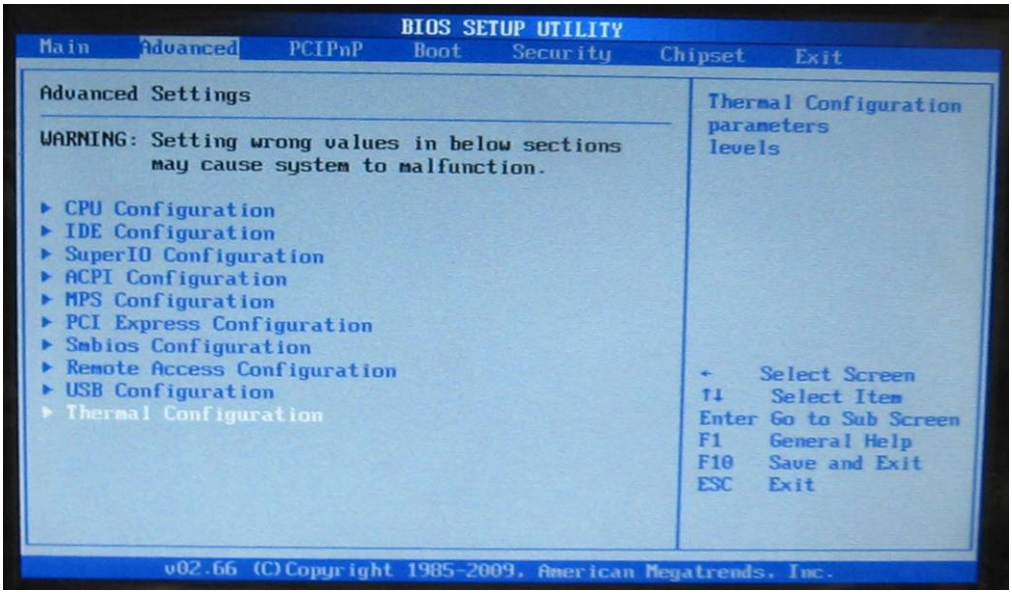


Figure 8-31 Advanced Settings Screen.

32. At the **Trip Points for DIS** screen. **No Change**. Press **Escape**. (Figure 8-32.)

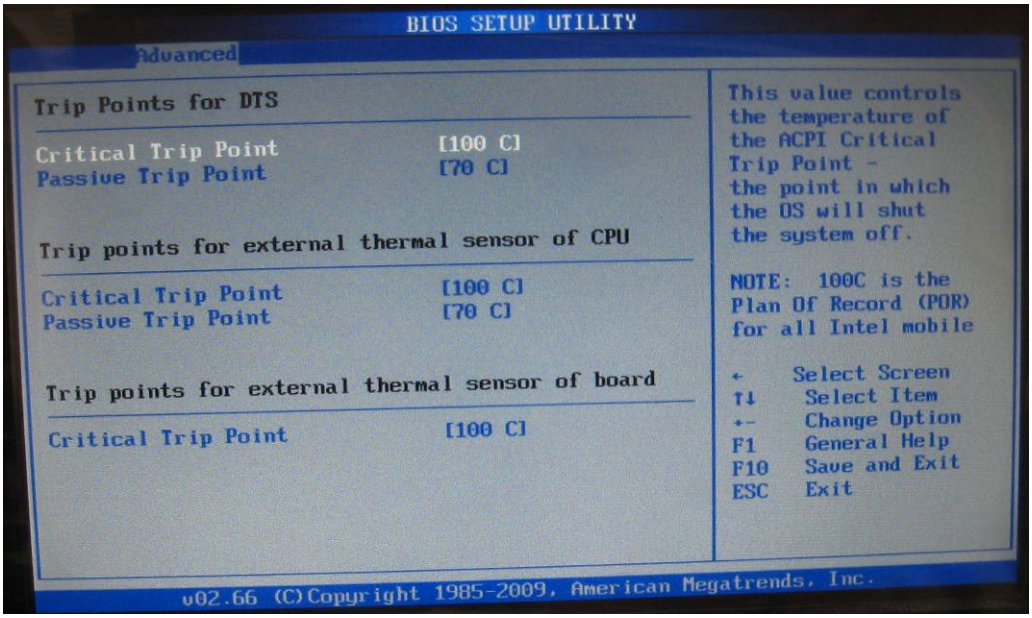

BIOS SETUP UTILITY
Advanced
Trip Points for DTS
Critical Trip Point [100 C]
Passive Trip Point [70 C]
Trip points for external thermal sensor of CPU
Critical Trip Point [100 C]
Passive Trip Point [70 C]
Trip points for external thermal sensor of board
Critical Trip Point [100 C]
This value controls the temperature of the ACPI Critical Trip Point - the point in which the OS will shut the system off.
NOTE: 100C is the Plan Of Record (POR) for all Intel mobile
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-32 Trip Points for DIS Screen.

33. At the **Advanced Settings** screen scroll across to the **PCIPnP** tag and press **Enter**. Figures (Figure 8-33 and Figure 8-34.) show the complete set up of the **Advanced PCI/PnP Settings**. **No Change**. Press **Escape**.

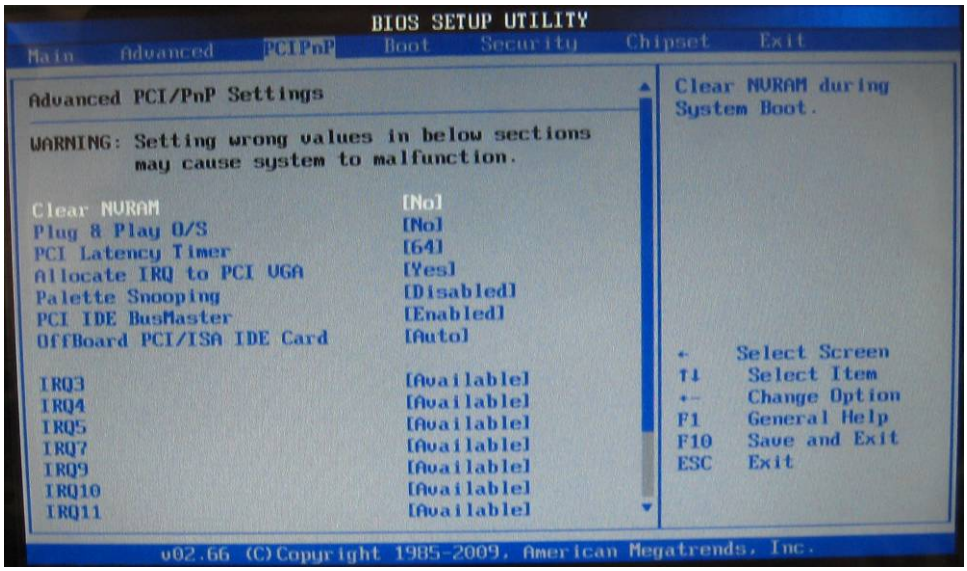


Figure 8-33 Advanced PCI/PnP Settings Screen.

34. **Advanced PCI/PnP Settings** screen (Figure 8-34.)

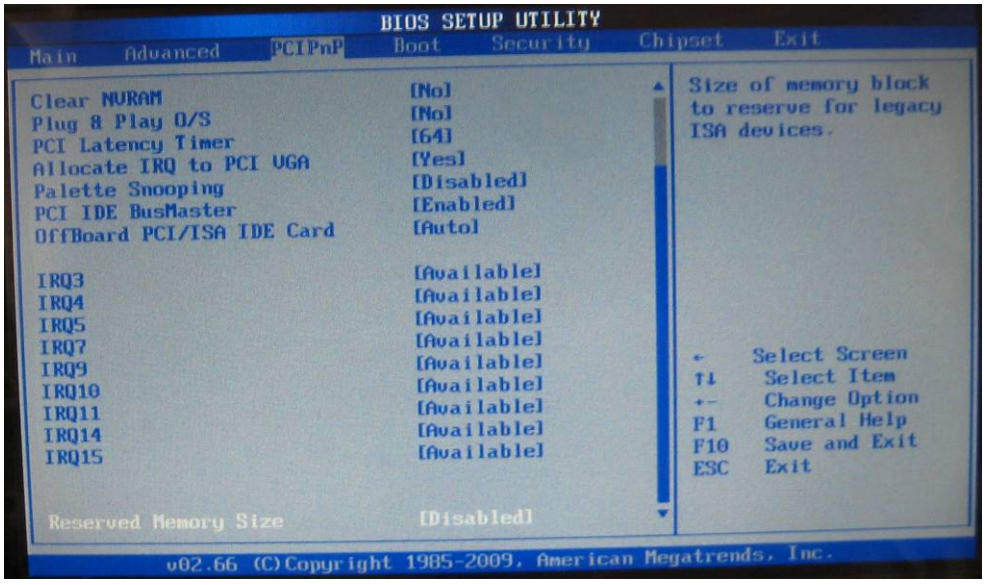


Figure 8-34 Advanced PCI/PnP Settings Screen.

35. At the **PCIPnP** screen scroll across to the **Boot** tag and press **Enter**. (Figure 8-35.)

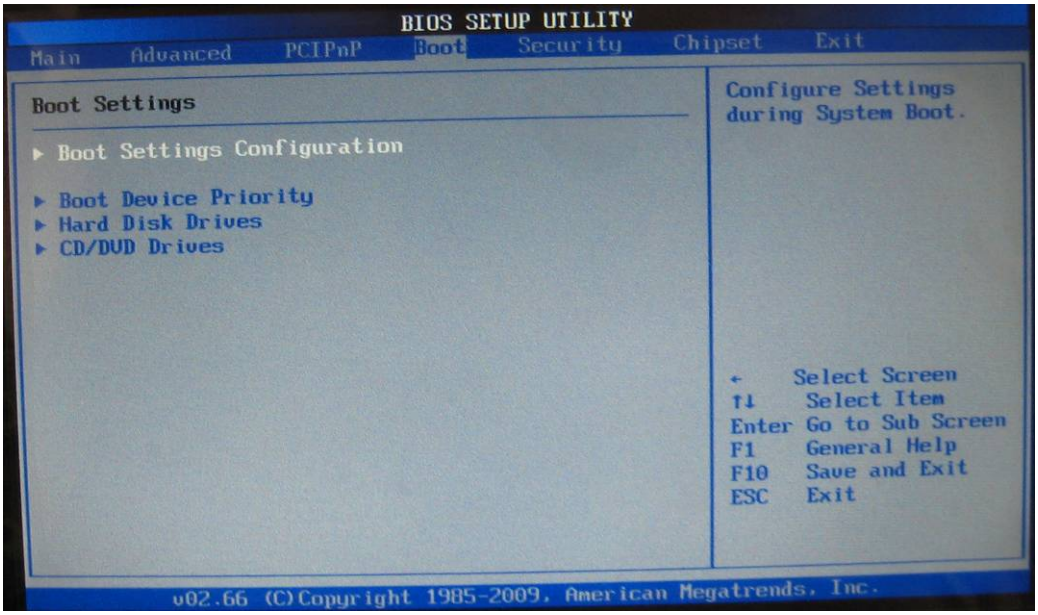


Figure 8-35 South Bridge Configuration Screen

36. At **Boot Settings Configuration** screen **Quick Boot** is highlighted**. No Change**. (Figure 8-36.)

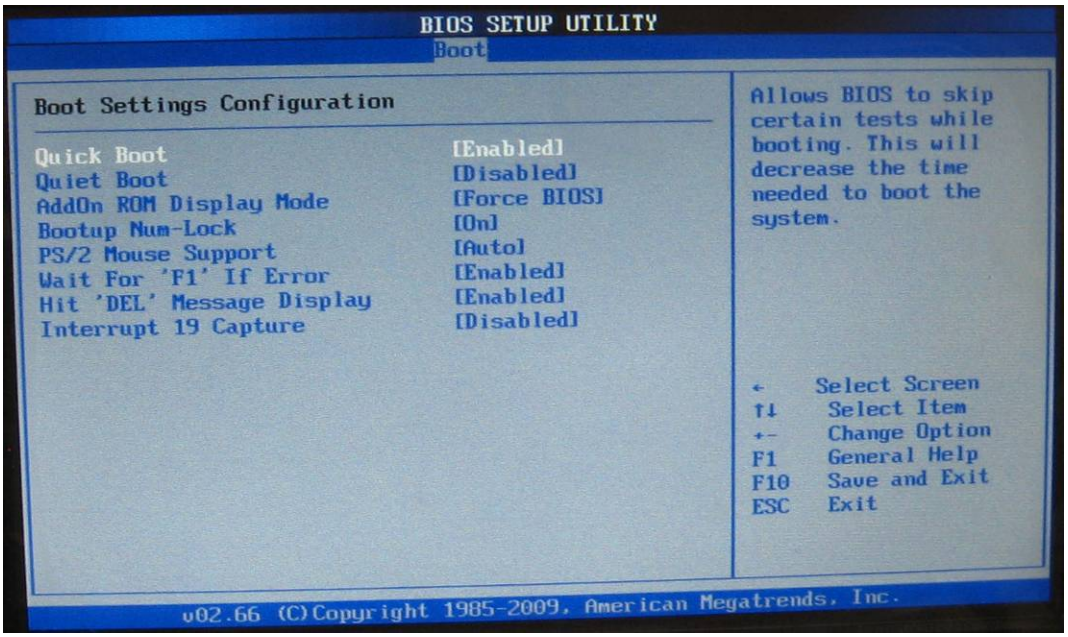

BIOS SETUP UTILITY
Boot
Boot Settings Configuration
Quick Boot [Enabled]
Quiet Boot [Disabled]
AddOn ROM Display Mode [Force BIOS]
Bootup Num-Lock [On]
PS/2 Mouse Support [Auto]
Wait For 'F1' If Error [Enabled]
Hit 'DEL' Message Display [Enabled]
Interrupt 19 Capture [Disabled]
Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-36 Boot Settings Configuration Screen.

37. At **Boot Settings Configuration** screen scroll down and select **Quiet Boot.** Press **Enter**. On the Popup Menu select **Enabled** and press **Enter**. (Figure 8-37.)

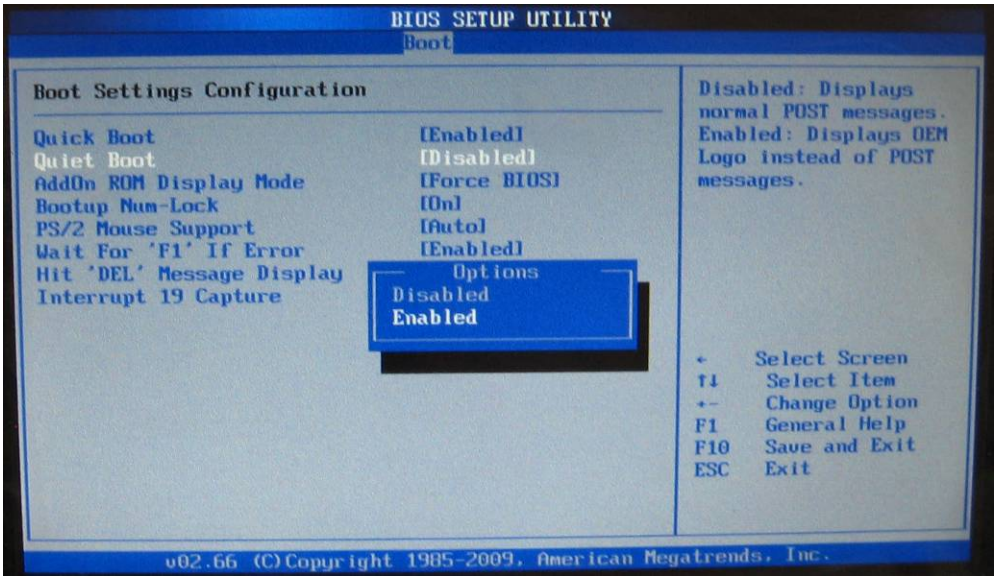


Figure 8-37 Boot Settings Configuration Screen.

38. (Figure 8-38.) shows **Quiet Boot Enabled**. Press **Escape**.

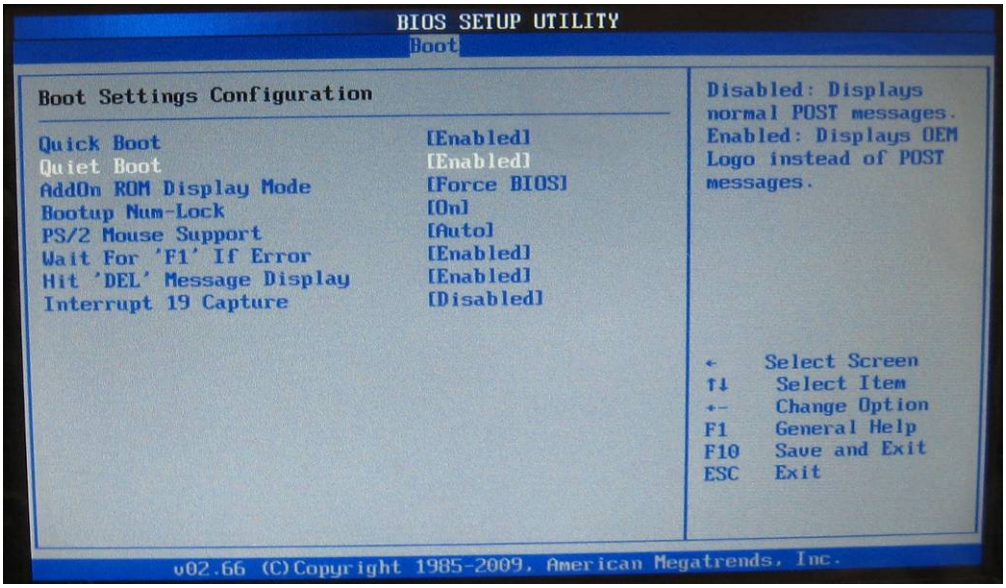

BIOS SETUP UTILITY
Boot
Boot Settings Configuration
Quick Boot [Enabled]
Quiet Boot [Enabled]
AddOn ROM Display Mode [Force BIOS]
Bootup Num-Lock [On]
PS/2 Mouse Support [Auto]
Wait For 'F1' If Error [Enabled]
Hit 'DEL' Message Display [Enabled]
Interrupt 19 Capture [Disabled]
Disabled: Displays normal POST messages. Enabled: Displays OEM Logo instead of POST messages.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-38 Boot Settings Configuration Screen.

39. At the **Boot Settings Configuration** screen scroll across to the **Security Tab** and press **Enter**. **No Change**. Press **escape**. (Figure 8-39.)

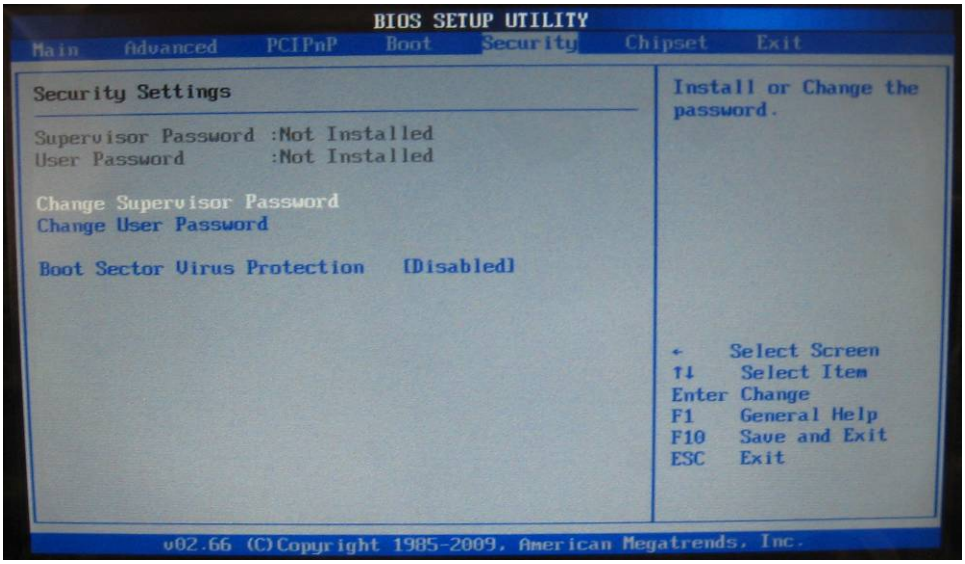


Figure 8-39 Security Settings Screen.

39. At the **Security Settings** screen scroll across to the **Chipset Tab** and press **Enter**. (Figure 8-40.)

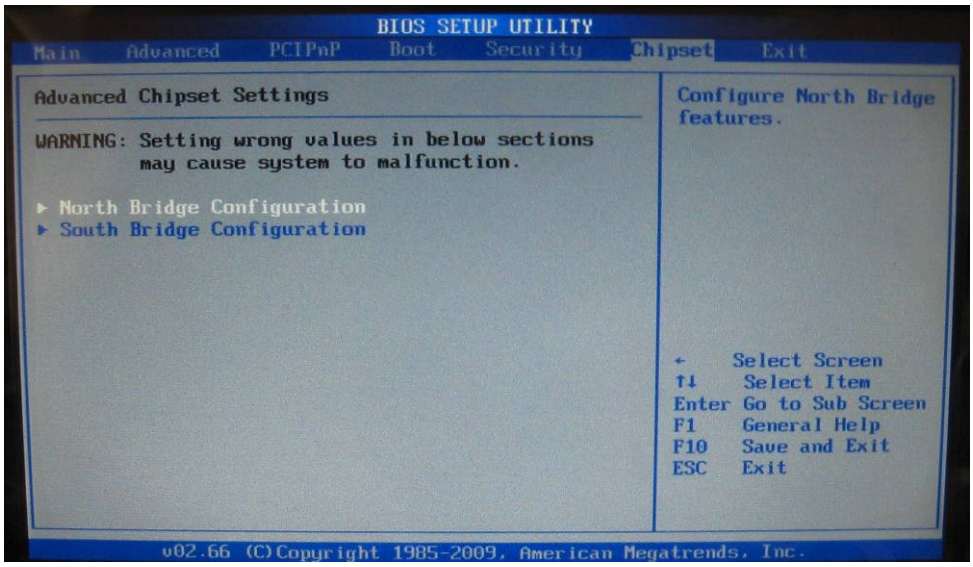

BIOS SETUP UTILITY
Main Advanced PCIPnP Boot Security Chipset Exit
Advanced Chipset Settings
WARNING: Setting wrong values in below sections may cause system to malfunction.
▸ North Bridge Configuration
▸ South Bridge Configuration
Configure North Bridge features.
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-40 Advanced Chipset Settings Screen.

40. At the **North Bridge Chipset Configuration** screen. (Figure 8-41.). Scroll down to **Boot Display Configuration** (Figure 8-42). Press **Enter**.

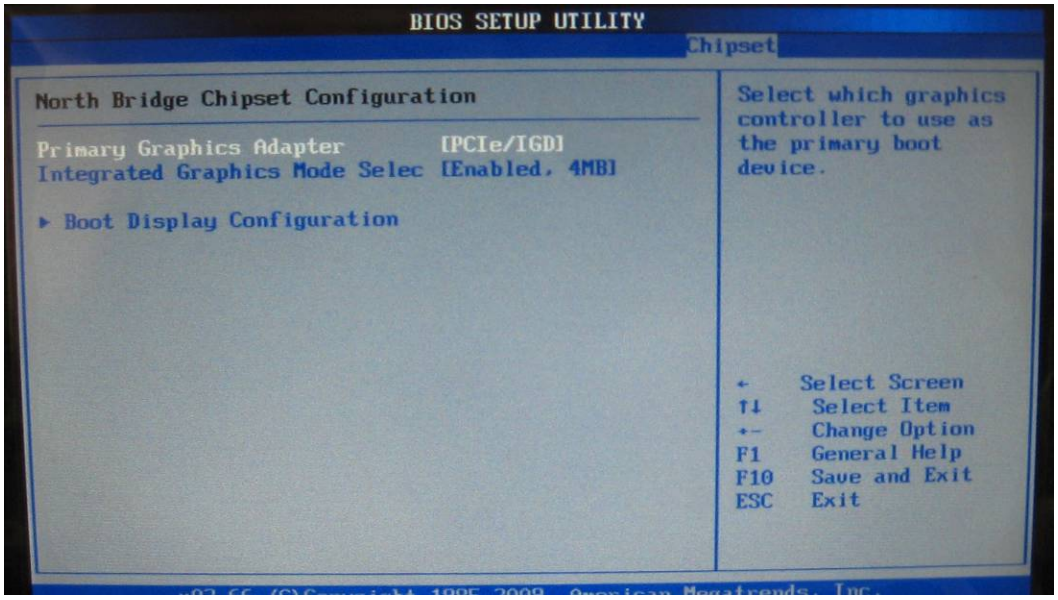


Figure 8-41 North Bridge Chipset Configuration Screen.

41. **Boot Display Configuration**. (Figure 8-42.)

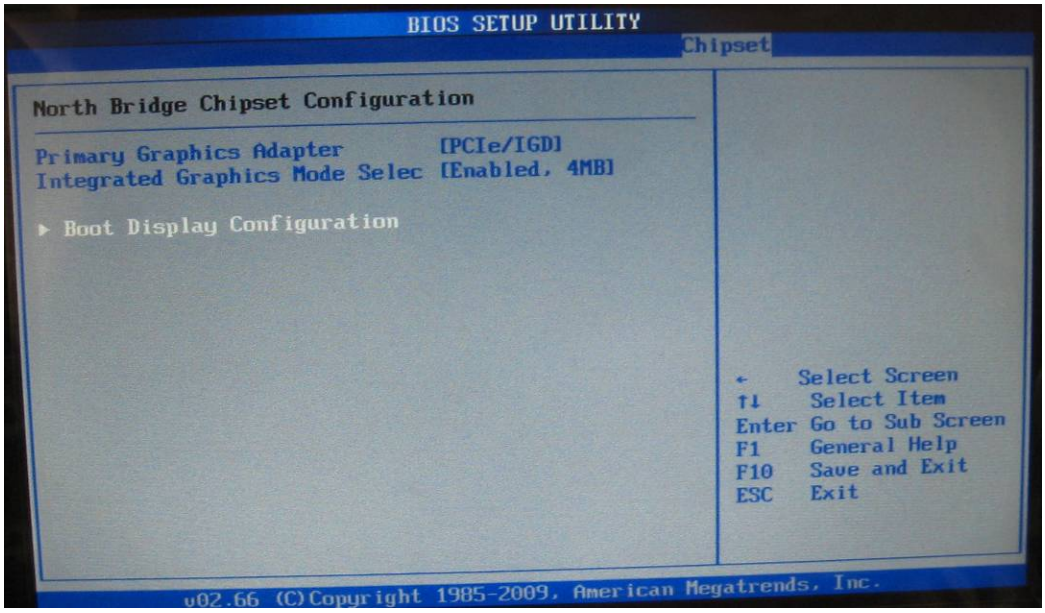


Figure 8-42 Boot Display Configuration Screen.

42. At **Boot Display Configuration** screen **Boot Display Device** is selected. **No Change**. Press **Escape**. (Figure 8-43.)

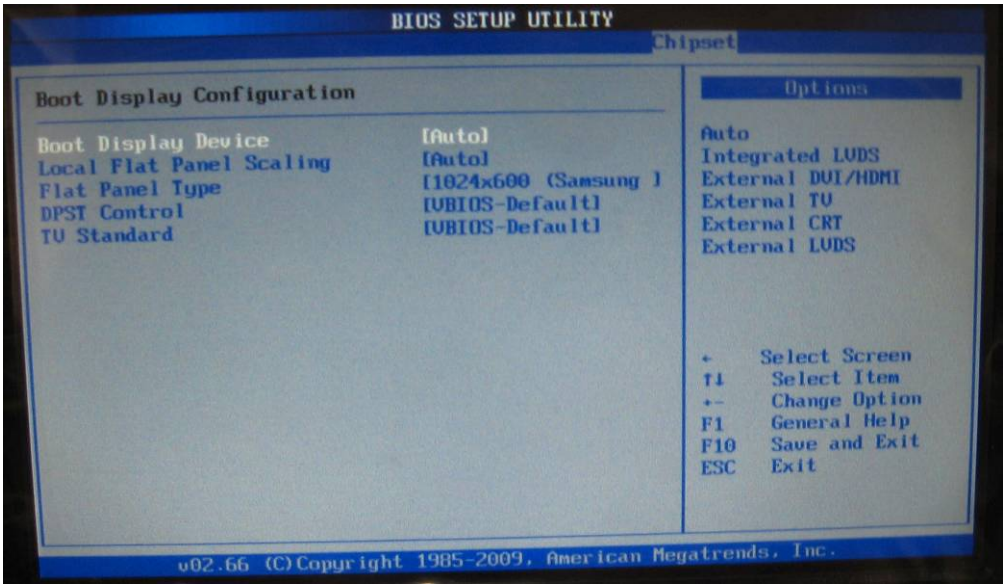


Figure 8-43 Boot Display Configuration Screen.

43. At **Advanced Chipset Settings** screen scroll down and select **South Bridge Configuration**. Press **Enter**. (Figure 8-44.)

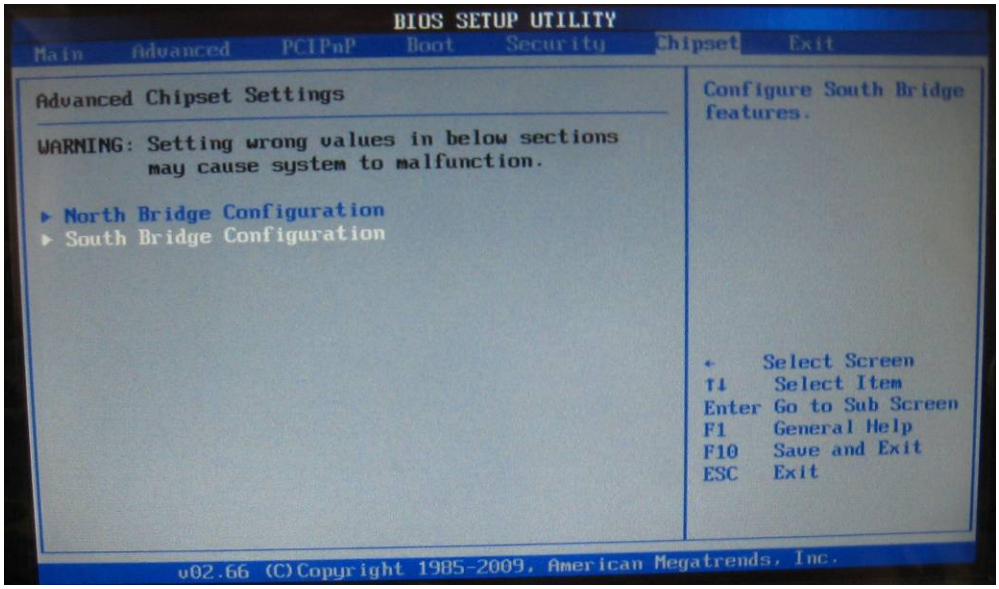

BIOS SETUP UTILITY
Main Advanced PCIPnP Boot Security Chipset Exit
Advanced Chipset Settings
WARNING: Setting wrong values in below sections may cause system to malfunction.
▸ North Bridge Configuration
▸ South Bridge Configuration
Configure South Bridge features.
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-44 Advanced Chipset Settings Screen.

44. At the **South Bridge Chipset Configuration** screen. **No Change**, Press **Escape**. (Figure 8-45.)

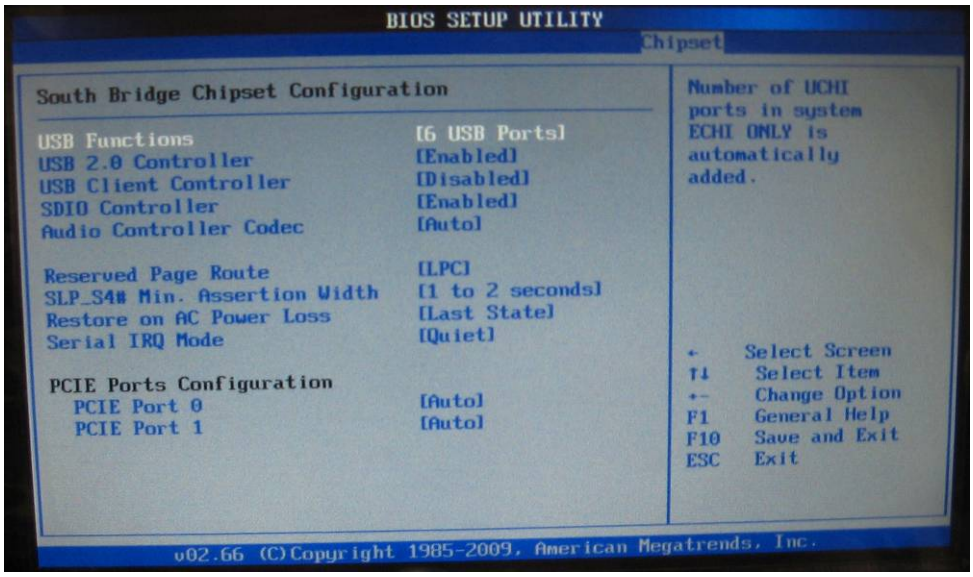

BIOS SETUP UTILITY
Chipset
South Bridge Chipset Configuration
USB Functions [6 USB Ports]
USB 2.0 Controller [Enabled]
USB Client Controller [Disabled]
SDIO Controller [Enabled]
Audio Controller Codec [Auto]
Reserved Page Route [LPC]
SLP_S4# Min. Assertion Width [1 to 2 seconds]
Restore on AC Power Loss [Last State]
Serial IRQ Mode [Quiet]
PCIE Ports Configuration
PCIE Port 0 [Auto]
PCIE Port 1 [Auto]
Number of UCHI ports in system ECHI ONLY is automatically added.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-45 South Bridge Chipset Configuration Screen.

45. At the **Advanced Chipset Settings** screen scroll across to the **Exit Tab** and press **Enter**. At the **Exit Options** screen select **Save Changes and Exit** Press **Enter**. (Figure 8-46.)

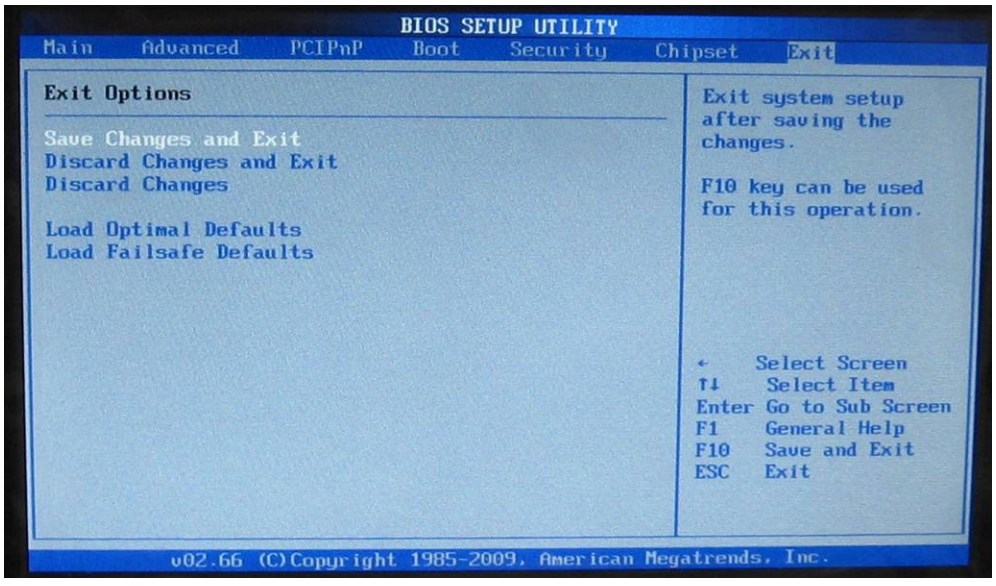

BIOS SETUP UTILITY
Main Advanced PCIPnP Boot Security Chipset Exit
Exit Options
Save Changes and Exit
Discard Changes and Exit
Discard Changes
Load Optimal Defaults
Load Failsafe Defaults
Exit system setup after saving the changes.
F10 key can be used for this operation.
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.66 (C)Copyright 1985-2009, American Megatrends, Inc.

Figure 8-46 Save Changes and Exit Screen.

46. Press **OK** to save your settings. (Figure 8-47.)

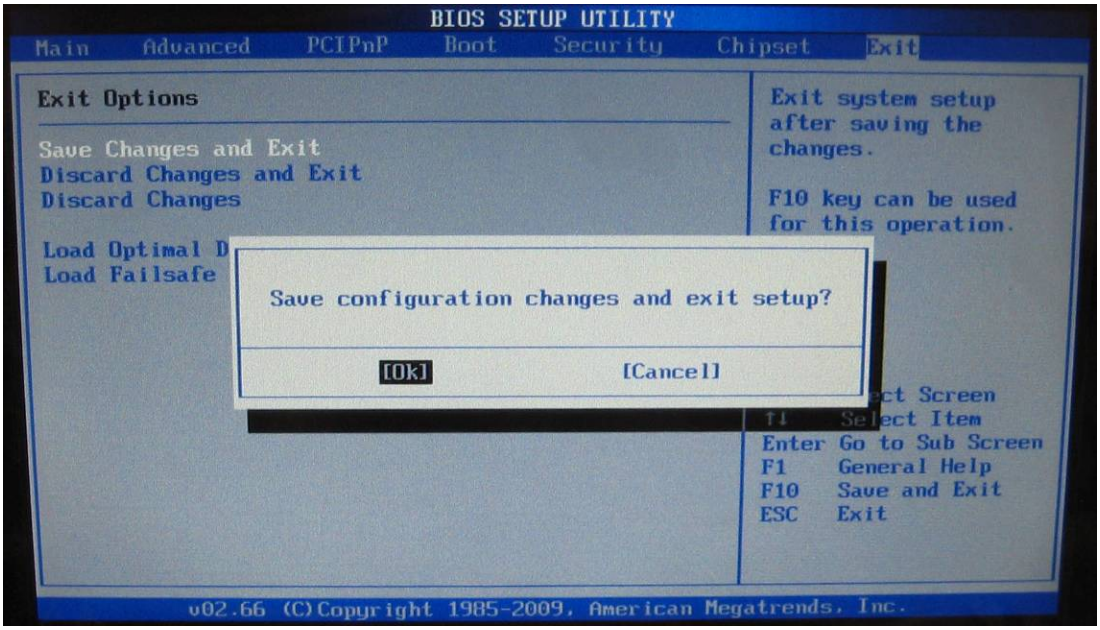


Figure 8-47 Exit Screen.

CONTACT

22355 TAG Way
Dulles, VA 20166
Tel: 1-800-824-8693
www.tag.com

Technical Support
USA 1-800-TAG-TECH
Outside USA

While every precaution has been taken
to ensure the accuracy and completeness
of this literature. TAG assumes
no responsibility and disclaims and liability
for damage resulting from use of this information
or for any errors or omissions.